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EDITOR:

ADAM H. WRIGHT, B.A., M.D.

ASSOCIATE EDITORS:

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JOHN CAVEN, B.A., M.D.

EDMUND E. KING, M.D.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

THE MANAGEMENT OF ABORTION.*

BY DR. R. W. POWELL,
OTTAWA.

IT is not my intention to launch out into some startling developments as to the management of abortion on such an occasion as this. Indeed, I would not deem it consistent with my present object in introducing this subject for your consideration in this discussion to deal with it in any other manner than the purely orthodox.

To such an audience as this, I am quite aware that I need not attempt any flights of fancy, nor do I flatter myself that I can advance any ideas as to how abortion should be managed that are not perfectly familiar to you all. All I hope for and all I ask is to have the privilege accorded me by your committee to introduce the subject to your favorable notice, knowing its great importance to us all as everyday general practitioners. I feel persuaded that those gentlemen who are to follow me will give me due credit for dealing with the subject in a general way, so that they will in no wise be hampered in dealing with any branch of it from their own point of view.

* Read at the meeting of the Ontario Medical Association.

First, in what way shall we deal with a woman who has shown a marked tendency to abort, or who, let us say, has not yet succeeded in bringing her offspring to maturity? This is a wide field, and affords ample scope for any man's pen; but I must ask you to be content with a brief survey of this branch of the subject.

It is admitted that, among general causes, syphilis stands out prominently as a cause of abortion, and it would appear that in such cases, so long as the poison is active, just so long will the uterus show a disposition to get rid of its contents. I am of opinion that an ovum diseased in this manner is the irritant which brings on the uterine contractions, due, no doubt, in some cases, to its premature death, and in others to the diseased blood circulating in the vessels of the uterine wall rendering the muscle unhealthy, and thus unfit to retain the strain put upon it by the development of its contents.

This, to my mind, is a fortunate provision of nature against the maturing of unhealthy offspring. It is in such cases as these that mercury has shown some of its greatest triumphs. I need not dwell on the course that ought to be pursued, excepting to guard you against always directing treatment to the mother, because it is undeniable that the male parent being a syphilitic may deposit the poison in a healthy woman, or perhaps I should say impregnate her with deteriorated semen, and so bring about the disaster above referred to.

Diseases and unhealthy conditions of the uterus itself are common causes of abortion, but fortunately we find in actual practice that they are equally likely to prevent impregnation occurring. Such causes as endometritis, parametritis, endocervicitis, with its attendant albuminous-looking plug of tenacious mucus blocking the canal and affording an effectual bar against pregnancy, fibroid disease, malignant disease, and that well-known condition of everted and patulous os, owing to a split cervix from former pregnancy, with perhaps an instrumental delivery. Malpositions come in for their fair share of blame, and in some cases rightly so. I need, however, only dwell for a moment on the retroversion and severe retroflexion which, for mechanical reasons, manifestly interfere with the progress of gestation. It is here that we can the most readily succeed by placing the woman in the knee-elbow position and replacing the uterus, retaining it there by a well-fitting pessary till the third month is completed; then, in most instances, it ought to be removed, as it often irritates the vagina if left too long, and besides, by the time mentioned, the fundus has risen out of the pelvis and no longer needs the support given by the pessary.

In the conditions above mentioned as causes, appropriate treatment will have to be rendered. Repeated abortions will sometimes occur in young married women, or, as I have known it, begin to occur after a wo-

man has borne one or more children at full term. This is known as a "habit of aborting," and is often most rebellious, even to well-directed treatment.

Whatever may have been the cause of the first case, we can only conclude that the endometrium has not regained its pristine condition, and is not capable of nourishing the ovum, or perhaps of retaining it. In a large number of instances, I am satisfied that this is due to that notorious pathological condition known as subinvolution.

While it is true that pregnancy offers the only hope of cure for this condition in a vast majority of cases, yet in the case we are now considering of repeated abortion it is this very thing, oft-repeated pregnancy, which is so much to be deplored, because sufficient time is not given for the uterus to regain its normal nulliparous state, and the waning strength of the patient from possibly repeated hemorrhages and constant illnesses is a prime factor in preventing proper and normal involution. Attacking this unhealthy endometrium by swabbing the uterus out with some moderate escharotic is followed by the best results in some cases; accompanied by change of air and scene, seaside resorts, an ocean voyage, moderate exercise and plenty of fresh air and good stimulating food, and, above all, a complete daily evacuation of the bowels in order to prevent vascular stasis in the pelvic organs, and to promote in them a healthy nutrition. All these must be tried and persevered in. With all this, if the patient remain at her home, absence of sexual intercourse must be insisted on for six or eight weeks.

In that other class of cases where no good cause can be assigned, but still the fact remains, we must be guided solely by general and common-sense principles. The nervous system seems sometimes to be at fault. It is here that rest is followed by the happiest results—rest on the back for an hour at a time, at intervals; but, more than all, complete bed rest for some days at the menstrual epoch is demanded, with such other means as will lead to diminish a special irritability, if such a cause is suspected.

What steps shall we take to avert a threatened abortion? The cardinal symptoms indicating this event are hemorrhage and grinding pains, often at first referred to the sacral region, and, later on, occurring in the hypogastrium.

It is true that abortion may happen without both these symptoms existing together, and hence if in a known or suspected case of early pregnancy only one of these symptoms presents itself we may at once place the patient on her guard, and prescribe at least one very important line of treatment, viz., perfect rest in bed on the back. It is quite impossible in most cases to determine whether the ovum is dead or not, and yet if we can once feel assured that it is our line of treatment must be quite different from that we would pursue if the case is one of slight separation of the decidua; be-

cause in this latter case we may properly, and with good prospect of success, hope to arrest the process that is going on, while in the former we ought to encourage its expulsion.

In the cases of repeated abortion where we know how readily the uterus expels its contents, the slightest show of blood-stained discharge must be regarded as the danger signal ; albeit we are aware how many pregnant women lose considerable quantities of blood without apparent inconvenience, or without in any way interfering with gestation.

Complete rest in bed on the back must be enjoined, and avoidance of all excitement ; plain, easily-digested food allowed ; and the exhibition of those drugs known by experience to diminish uterine irritability, and generally to prevent muscular contraction. We have in opium a powerful means for fulfilling these indications, and it is well known how great a tolerance there exists in these cases for the drug. It is therefore to be given in full doses, and repeated sufficiently often to keep up its effect. Solid opium, morphia by the mouth or hypodermically, laudanum per rectum or in mixture, and also suppositories, may be used in such a case, at the discretion of the practitioner. Viburnum also has been highly lauded ; pot. bromide is often very useful. These measures frequently avail to stave off the abortion, and if they do we should insist on the patient remaining in bed a week at least after the symptoms have entirely disappeared, and to resume her ordinary mode of life and avocations gradually, and with care to avoid all those causes which tend to a recurrence of the symptoms. Sexual exercise must be prohibited for a time. I regard this as imperative, and I am satisfied that by being indulged in it is constantly the cause of a recurrence of the symptoms after a successful treatment on the lines above indicated.

If in spite of treatment the symptoms persist or increase, as shown by greater and more frequent pain, increase of discharge containing clots, and accompanied by amniotic fluid, and on examination we find a soft, patulous os with a dilated cervix, and perchance the presentation of a soft mass of membranes therein, we may conclude that the abortion has become active, as distinguished from threatened ; and while it is true that such cases have often been known to become self-arrested and pregnancy continue uninterrupted, yet the rule is that abortion occurs, and our treatment ought to be directed towards effecting that result.

How do we conduct a case of actual abortion ? The great desideratum is to secure the throwing off of the ovum with its membranes entire. This once assured the treatment is, in a large majority of cases, very simple.

In primiparous cases my experience has led me to regard the "let alone" policy as the wisest, as in them we rarely find hemorrhage excessive, owing to the slow dilatation of the cervix and the complete manner in

which the ovum fills the canal, thus affording the best safeguard against undue hemorrhage. It is nature's tampon. If the pains are regular and good, nothing is demanded except rest in bed. I am not in favor of even vaginal douches in such a case, unless the lochial discharge is offensive, and then I favor weak solutions of permanganate of potash in boiled water, and a good pad of sublimate jute to receive the discharge. If the pains are not good, then the exhibition of a good preparation of ergot will assist matters. It is important to secure the expulsion of the ovum as quickly as possible, because the longer it remains *in utero* the greater the disintegration of the membranes and the formation of septic fluids, and consequently of their absorption through the veins and lymphatics in the vicinity. It is notorious, however, that the process of expulsion in these cases lasts often several days. Even so, if the lochia remains of good quality and is not offensive, and the patient's temperature remains normal, or nearly so, with a pulse under one hundred and no chills, I am entirely opposed to active interference in any manner as regards the removal of the ovum. Any interference will militate against what I began by saying was the great desideratum, viz., the discharge of the ovum entire.

In cases where the hemorrhage is excessive, and is coming away in clots, and especially where the patient is multipara, the vaginal tampon, properly applied and tucked well around the cervix, is a useful means of assisting the process of dilatation. It likewise, by preventing the continuance of hemorrhage, allays the patient's fears. It saves much valuable time to the practitioner, and when the patient lives at a distance is necessary to ensure her safety. I know of few more comforting and consoling moments than retiring to rest after an anxious hour or two towards the mystic hour of midnight leaving a vagina comfortably packed with an aseptic tampon, and giving a promise to call in the morning.

A different picture is presented to us when the amniotic sac ruptures and the ovum is discharged minus the decidua. It is here that our judgment, experience, and patience are often severely taxed. To control the hemorrhage, which is usually severe in these cases, I am in the habit of administering gallic acid and ergot, combining a little morphia and spirits of chloroform with it if the pains are severe and hard to bear. The morphia allays the acute character of the pains, while it does not altogether arrest them, and, if the cervix is not yet dilated, no good can accrue by permitting undue suffering, and until it is dilated we cannot expect the ovum to be discharged. This I say in defence of the addition of any preparation of opium to the mixture, which, according to my previous remarks, would be contraindicated when the abortion is inevitable. The tampon I have found to be a useful measure in these cases, as limiting the hemorrhage, and, I believe, promoting dilatation of the cervix ; but it ought

to be changed every four or six hours, according to the severity of the pains and the amount of the hemorrhage. Many a time have I pursued this course, and on the removal of the second or third tampon found the decidua wholly discharged and lying in the vault of the vagina, to my entire satisfaction and complete peace of mind. The case, however, does not always pursue this amiable course; the bleeding persists, the patient is getting weaker, the pains are diminishing, and still the decidua remains *in utero*, and no doubt are the direct cause, by their incomplete separation, of the continued and often alarming hemorrhage.

What are we to do? It is plain we must interfere and effect their removal. My own partiality is for the index finger. It is a natural curette, if it is clean, with a sentient surface at one end, and connected at the other with an educated brain. It is freely movable at will, and altogether is admirably adapted to scoop out the cavity of the uterus; but, alas! sometimes it is too short to fulfil its functions.

The description we read in books as to the facility with which we can scoop out the uterus with the finger is all nonsense. We are told to insert it up to the internal os, then to go up one wall clearing it off, then across the fundus from one corner to the other, and, finally, down the opposite side, sweeping everything in its path. The grand result of this often corresponds to the "Frenchman and the Flea": "You put your finger on it, and it's not there." Still, it is a useful act, and in a soft, patulous cervix with yielding abdominal walls, and patient who won't resist you all she knows how, it often succeeds, and we are rewarded with a handful of membranes and a rapidly ceasing hemorrhage.

I do not think much good occurs from immediately washing out the uterus, as is so often advised. Such, at all events, has not been any practice unless the character of the discharge demands it. An offensive discharge, a chill and a rise of temperature following the abortion, would indicate to me that a douche and an intra-uterine one was demanded. So far I have favored the carbolic acid and permanganate of potash for this purpose. I have not used peroxide of hydrogen for this purpose, but its excellent reputation as a destroyer of germs and pus points to it as a valuable means of effecting the object we have in view. I have not spoken of the curette or the placental forceps as a means of removing the contents of the uterus, because they are only means of effecting the same purpose for which the finger is used. In many cases, they are an unfortunate necessity. In all cases they must be used with great care and skill; and in some cases they are positively unjustifiable.

I forbear to speak of the result of neglected abortion. The subinvolution, the leucorrhœa, the menorrhagia, the sacral pain, and the general malaise and the invalidity unite to compose a picture often the result of

crass ignorance, or, what is more to be deplored, gross carelessness, on the part of some one ; yet nevertheless a field full of honor, of good will, and of handsome fees, reaped with zeal into the garner of our everlasting friends, the gynecologists.

(TRANSLATION.)

LITHOPÆDION.

Report of a case presented to the Berlin Medical Society,

BY DR. GOTTSCHALK, BERLIN.

Translated by

W. LEHMANN, M.B.,

Physician to House of Providence and Home for Incurables.

THIS child, which I removed this afternoon from a fifty-four-year old patient by laparotomy, was carried by its mother for thirty years. The mother menstruated first at fifteen, was married at twenty-one, and at twenty-two gave birth to a daughter, who died two years ago of tuberculosis. The second year afterwards she again became pregnant, and went on in the usual way without any abnormal symptoms until the end of the term, when pains came on and lasted several days, without making any progress towards delivery. Dr. Rudolphi, of Neustrelitz, who was called in, found the abdomen so distended that he could not at once make a diagnosis ; but the pains continuing and becoming stronger and stronger, and the os not dilating at all, he concluded that it was a case of extra-uterine pregnancy, and laparotomy in those days, thirty years ago, being very little thought of, he left the patient to her fate. Nature, however, came to her assistance. She was confined to bed for eighteen weeks with a severe attack of peritonitis, with repeated chills and high fever, but she recovered, and menstruated regularly again until the menopause, which occurred at fifty years of age. She said that so long as she wore a bandage which held the child back well in the abdominal cavity she experienced very little trouble. About two years ago, as a result of a severe bodily exertion, the child seemed to suddenly sink lower in the abdomen, and from that time she began to have difficulty with her urine, and other symptoms of pressure in the pelvis. The physician in attendance said that the head, which previously lay in the left iliac region, had now descended partly into the pelvis. He ordered a bandage, which gave very little relief, but it was found that suspending the patient head downwards caused the child to slip back to its old position in the

abdominal cavity, and gave relief of the troublesome symptoms. This plan of treatment, which always gave relief, lasting from one to two weeks, was kept up until a few months ago, when this natural and rational method failed; the child could not be got back out of the pelvic cavity, but sank deeper and deeper, and the incarceration symptoms, especially of the urinary bladder, became rapidly worse, and the patient was sent to me for operation.

I found the patient in an extremely reduced and weakened condition, the pelvic cavity completely filled by a bony-hard tumor, which plainly had the configuration of a child's skull. The sagittal suture was in the right oblique diameter, and the posterior fontanelle could be felt anteriorly and to the left. The occiput rested immediately behind the symphysis, deep on the floor of the pelvis, the position being just what one might expect in the second stage of normal labor, except that the head was not in the vagina. The uterus was small, and lay pressed against the hollow of the sacrum. The tumor extended upwards into the abdominal cavity as far as the umbilicus, and could be felt through the atrophied abdominal wall as a bony-hard, irregularly shaped tumor, broader above, and with dull projections on both sides a little below the umbilicus corresponding to the extremities. The diagnosis after this finding was clear. An attempt under anæsthesia to push the head back out of the pelvis failed, and the miserable condition of the patient, together with the danger of gangrene of the bladder from pressure, urged the necessity of a laparotomy.

When the abdominal cavity was opened, the surface of the tumor was found adhering very extensively to the parietal peritoneum and omentum, and after these had been loosened partly by the fingers and handle of the knife, and partly by the use of the scissors, very extensive adhesions to the intestines, bladder, and pelvic peritoneum were also found; but by adding a cross incision to the usual longitudinal incision in the abdominal wall more room was obtained, the adhesions were removed, and by the help of the assistant's hand in the vagina the tumor was elevated out of the pelvic cavity. It was then found to be connected to the uterus in the same manner as an ovarian tumor. It was attached to the posterior surface of the ligamentum latum, and to the ligamentum infundibulo-pelvicum. It was torn from its attachments by lifting it out, and in consequence there was profuse hemorrhage—which could only be stopped by extensive ligaturing—from the gaping spermatic vessels and from the posterior surface of the ligamentum latum, which was here very vascular. The spermatic artery was almost as large as the iliac. The ligamentum ovarium and the long distended unchanged tube extended upwards and outwards to the place of attachment of the tumor. The uterus was pressed flat and twisted, and from its anterior surface strands of connective tissue extended to the

bladder. The appendages of the right side were perfectly normal, but the left ovary was entirely wanting. The patient has recovered well from the shock and exhaustion of the operation, has a good pulse, and I look for a favorable termination.

[Supplement by the proofreader: The patient has made a good convalescence, perfectly free from fever.]

That this was a case of ovarian pregnancy is proved to a certainty by a close examination of the specimen. You see the tumor, covered by a thin membranous enclosed sac, which is firmly adherent to the several millimeter thick calcareous layers lying underneath. I have partly prepared this membrane. You can see with the naked eye different corpora lutea, which are pressed flat, and therefore appear very large. You can also make out several individual follicles. It is therefore doubtless that the whole ovum lies enclosed in an ovarian sac. You see here on the one side also the second stratum, the calcareous layer being dissolved away, and you will find on the inner surface still the placenta with the vessels beautifully preserved. You can also see the membranes starting out from the attachment of the placenta. This condition of the placenta also goes to prove that it was a pure ovarian pregnancy. The child itself is, as you see, well preserved; the skin of the extremities is partly encrusted with calcareous matter; the hair of the head and finger nails are very plainly visible. It lies in extreme flexion; the spinal column and head flexed *ad maximum*. In these days, when every extra-uterine pregnancy is looked upon as a dangerous neoplasm and immediately operated upon, one very seldom has the opportunity of seeing cases of this kind. It is interesting to see how nature, in such cases, can bring about a cure, and we also see how, after thirty years, unhappy conditions can arise which make a laparotomy necessary. Pure cases of ovarian pregnancy like this have only very seldom been observed. The lithopædion weighs nearly five pounds.

DISCUSSION. Herr Hahn: I operated on a case of lithopædion several years ago which also had been carried by the mother about thirty years. It was interesting, as was also the Wurzburger case described by Virchow, and which had been carried thirty-two years, because it could be microscopically proved that the muscles were completely preserved. One could make out the transverse striation very plainly in most of the muscles, and in other organs also lying under the petrified layer individual parts, as bone, intestine, etc., were so well preserved that they could be demonstrated microscopically as such.

Selected Articles.

OPERATIONS TO PRESERVE THE UTERINE APPENDAGES.*

By W. M. POLK, M.D.,

Professor of Obstetrics, Diseases of Women and Children, University of the City of New York ;
Gynecologist to Bellevue Hospital ; Obstetrician to the Emergency Lying-in Hospital.

THE first case presented to-day will probably afford an opportunity to demonstrate a procedure with which many of you are no doubt familiar, namely, the enucleation of a cyst from an ovary, leaving the sound portions of the organ. Those of you who have been here for the past two years are familiar with the reasons for the attempt to preserve the sound portions of diseased ovaries when it is feasible, and you have had many opportunities of witnessing from your seats in this amphitheatre the various steps required in such an operation. The principle involved in the attempt to preserve ovarian tissue lies in the belief that among women in general, especially the young and those who are married, ovulation is essential to their mental and physical well-being, and therefore an attempt is proper, in appropriate cases, to preserve as much of the ovaries as is compatible with safety to the patient's life.

The objection has been made that these operations are unjustifiable, as they seem to tamper with the life of the patient ; but you must not forget that the mortality of abdominal section, in the hands of a competent operator, is to-day reduced to a point which makes the procedure one of so little risk that the above criticism is robbed of much of its force. We will not attempt to discuss this bearing of the question here, however, but shall proceed at once to the operation.

Section, in this case, has revealed to us two ovaries, each containing a cyst, one as large as a lemon, and the other as large as a pigeon's egg. Under the usual methods of procedure, both these organs would have been removed ; but you saw the ease with which the cysts were opened, their contents evacuated, the sac wall removed from its bed, the defect in the organs corrected, and their return to the abdominal cavity. In order that you may understand what was done, I will describe the procedure in detail. First, as to the anatomy of the structure in question : These cysts were single, there, fortunately, being none other in either organ. Their composition being identical, what is said of one applies equally to the other.

* Clinical lecture delivered at the Bellevue Hospital, New York.

Taking the larger one, we find from without inward that it has its peritoneal covering, then the tunica albuginea, then the sac proper, which corresponds, no doubt, here to the epithelial lining or *membrana granulosa* of the Graafian follicle. Be that as it may, however, the lining membrane is the essential structure in the development of the cyst. It is to that, then, that attention should be chiefly turned. Before speaking, however, of its enucleation, it is proper to call attention to the blood supply, because upon the management of the bleeding points which occur in connection with such enucleation depends, in a measure, the success of the whole operation. The vessels that are concerned are those which lie just outside the *membrana granulosa*, consisting of the *tunica propria* in the normal follicle. They are branches of the ovarian vascular system, and run from the bottom of the sac upward and outward, to be distributed over the surface of the cyst. They can be secured, however, by ligatures, passed, if need be, on needles.

In this case, the course pursued, as those nearest will easily see, was—first, the ovary and cyst were withdrawn from the abdominal cavity intact, the pedicle being long enough to permit of it, an incision then made directly into the cyst, and its contents—the straw-colored serous fluid—evacuated. The cyst wall was then seized with a pair of hæmostatic forceps and separated from the outer linings; then, with the assistance of the finger, it was easily enucleated, all parts of it being removed. This left a considerable area of peritoneum and tunica, upon the inner surface of which were numerous bleeding points. The expanded structures were cut away near to the level of the ovarian surface proper; the bleeding points in the cut edge were then secured, and the edges of the opening, which now remained in the ovary, brought together by means of a Lembert suture. This bringing together of the peritoneal surfaces of the base of the cyst, and turning in the cut edges in such a way as to fill up the hole in the ovary, is an important step. The procedure, as you see, is comparatively simple, and when conducted in the manner in which it was performed in this case—outside the abdominal cavity—occupies but little time.

In the case of intra-ligamentary cysts, the method of procedure begins with the enucleation of the ovary from its position in the folds of the broad ligament. It is best, therefore, in these cases, to make our primary incision through the peritoneal covering, then enucleate the ovary proper from its embedded position, bringing it as near the surface as is possible before beginning with the enucleation of the cyst. Having opened the cyst, however, the method of procedure in all cases is the same—that is, first, removal of the cyst wall; second, cutting away all excess of tissue which had been thrown around the cyst proper, the securing of bleeding points, then inversion of the cut edges, so as to leave a smooth and as

natural a surface as possible for contact with the surrounding peritoneal surfaces.

Some one asks the question as to the likelihood of other cysts appearing at a later period in these organs. It is to be confessed that the precise determining cause of the cyst, in any one instance, has not yet been clearly defined. In general, however, I think we are justified in believing that a peritoneal inflammation, brought there, as it so often is, through the tubes, is the starting point. The ovary, in common with structures near the end of the tube, becomes involved in the inflammation; and while the acute phases of the disorder may subside, yet such damage is wrought in the ovarian stroma as to initiate changes which, at a later period, show themselves as these cysts. It is fair to assume that if cysts are to be developed in an ovary, they will show themselves at about the same period of time. If, therefore, we have an ovary that shows but one or two or at the most three cysts, I believe we are justified in feeling that, with the removal of these cysts, the remainder of the organ is reasonably secure. Be this as it may, so much importance do I attach to the preservation of ovulation in most women, especially the younger married women, as has already been said, and, on the other hand, such is the relative safety of abdominal section in educated hands, that to preserve the one I should not hesitate to advise risking a repetition of the other.

You have seen this and similar operations in this amphitheatre since your entry into this institution, two years ago, as since 1884 it has been the custom, as a matter of clinical routine, to perform abdominal sections before the class. With the erection of the present amphitheatre, on an average two abdominal sections a week have been performed before the class during the college year, and in all that time, since 1884, but one of these patients has died, and that one from hemorrhage.

PYOSALPINX.

This patient reports to us to-day in order that we may determine the result of an operation performed upon her one year ago in this amphitheatre. A reference to the case-book shows that it was an instance in which the outer extremity of the tube, which was distended with pus to the size of a pigeon's egg, was amputated just inside the dilated portion, the ovary being undisturbed. In other words, the case was one of pyosalpinx. Prior to operation she had suffered from the characteristic symptoms of recurrent pelvic inflammation. At the time of operation both tubes were found to be filled with pus. The right ovary also contained pus, but the left was free from it. We removed the right tube and ovary in the usual manner, but upon the left side simply removed the dilated portion of the tube, the pyosalpinx proper.

The patient made, as you see, an excellent recovery, and now, at the

end of a year, returns to report her condition. Before speaking on that point, however, I have a word to say concerning the method of determining the presence or absence of pus in an ovary. Wherever a pyosalpinx exists, if the process be anywhere near the acute stage, no matter whether it be an original acute process or a secondary one, there is a possibility that purulent infiltration may be present in an ovary, and yet not show itself by distinctive features upon the surface.

In a chronic or subacute pyosalpinx, an associated purulent inflammation of the ovary would be evident in the form of accumulations cystic in character, these being recognized by the enlargements which they occasion. In either instance, it having been determined to preserve the ovary, it is important to have the means of detecting the presence or absence of pus in this organ. In the case of the cyst, an aspirating needle would determine it, but an aspirating needle would not answer in the case of a diffused purulent process. Here I know of nothing except direct incision of the organ which will enable us to determine the question. In this patient the inflammatory process being somewhat nearer an acute than the chronic stage, I resorted to incision of the ovary upon the two sides, so that in stating that the right ovary contained pus, and that the left ovary was free from it, I was sure of my position. In answer to your question as to the manner of operating in these amputations of the tube, I will say that the tube is cut off, as a rule, almost opposite the centre of the ovary, although the point of dilatation may be about opposite the outer third of that organ ; it is subject to a variation, however, dependent upon the encroachments of the dilatation. In passing your ligature so as to effect the amputation, it is passed through the mesosalpinx, immediately beneath the tube, at the point you select for amputation. It is then brought around outside the tubo-ovarian ligament or fimbria, close to the ovary, and tied. This secures all the vessels passing between tube and ovary in the mesosalpinx of the amputated portion. The tube is then amputated and cut away from the mesosalpinx. The tube is thus outside the ligature. The action of the ligature, thus placed, is to draw the ovary in close relation with the cut end of the tube and place it near the uterus, securing it a good position, which, as you see, in this case has been maintained. The little bleeding which occurs sometimes from the walls of the tube is easily stopped by pressure forceps or hot sponges.

Do not for a moment suppose, gentlemen, that it is our expectation that pregnancy will be possible in this case. We aim to preserve ovulation in a young married woman, not only because we feel that in her particular case the mental effect of such a preservation is desirable, but also because in her, as in all young women, the preservation of ovulation insures preservation of the nutrition of the organs of reproduction. Atrophy,

with its attendant inconveniences, is the rule where ovulation ceases, whether at twenty or at forty. You can readily understand that such atrophy, in a case like this, would be, apart from every other question, undesirable. Menstruation in the woman has been regularly maintained up to the present time. During the first four months it was excessive; since that time it has diminished, and, while present, is less than it was under former normal conditions. As you see, the nutrition of the tissues has been preserved, and this is especially well shown in the condition and appearance of the mammary glands. The woman is in excellent health and does her daily work with comfort.

We began the operation designed to preserve the uterine appendages in 1885, at the time when the furore over the total extirpation of the appendages, even in mild forms of disease, was at its height. I well remember the first case operated upon here, and the looks of incredulity upon the faces of the older members of the class (most of them practitioners) who listened to my outline of the plan proposed, doubting not only the practicability, but also the justice of the procedure. You, however, who have witnessed the results of the work performed in years gone by may in your own work justify the teachings in this direction which have formed a part of your regular course of instruction during the past two years. In opening the abdomen in cases of chronic disease of the appendages, let me again urge upon you the propriety of making such incisions exploratory in their nature, leaving the question of removal of one or all of the appendages until after the organs have been exposed. I submit to you certain propositions which are the outcome of the work in this department which I have had the honor of conducting before you in this amphitheatre.

First, having made your incision, let the condition in which you find the ovary be the main factor in determining the question of procedure. If need be, the state of the ovary (as I have already suggested) may be determined by an exploratory incision or puncture.

Now, if the ovary contains pus, you should remove it, and with it the associated tube, my idea being that whenever an ovary is removed the tube should accompany it. If the tube contains pus, the ovary being free both from pus and from disseminative cystic degeneration, you are at liberty to amputate the tube, leaving the ovary; it being understood, however, that the patient is at liberty to demand the removal of all the appendages if she should so wish. The same general remark applies to cases of hydrosalpinx and hematosalpinx.

As you have already seen, cysts of the ovary do not, of necessity, call for entire removal of the organ. Where they may be enucleated, pursue that plan, following out the suggestions of operation as already outlined.

An ovary which is enlarged from congestion, as in prolapse, can be cured by suspension better than by removal. Tubes with the fimbriated extremity open, even though adherent and affected with parenchymatous inflammation and endosalpingitis, do not require removal, except when they open into pus-loculi, as in certain cases of pelvic abscess. The tube whose outer edge is closed may be opened and cleansed, its inner and outer coats united, and then returned to the abdominal cavity, provided it does not contain pus and possibly old blood, or its walls destroyed, as in hydrosalpinx. This is a procedure which you have witnessed here time and time again, and the results, in all cases which we have been able to reach, have been such as to justify the wisdom of the procedure.

Once for all, understand that adhesions do not demand the removal of the tubes and ovaries unless they be so dense that in breaking them the appendages are seriously injured. This presupposes that the appendages in themselves are not sufficiently diseased to demand removal.—*International Clinics*, vol. iii., 2nd series.

Clinical Notes.

MUCOUS COLITIS.

By J. T. FOTHERINGHAM, B.A., M.D.,

TORONTO.

MRS. R., married, æt. 44, wife of shopkeeper.
Family history. Father died, æt. 60, of pneumonia. Mother living, æt. 74, stout, and in good health but for rheumatism. Six brothers, æt. 50, 48, 46, 36, 34, and 25, and one sister, æt. 40, all in fair health. One died at the age of fifteen months from a summer diarrhœa.

Personal history. As a child had measles, scarlatina, mumps, and, at the age of fourteen, diphtheria. Apart from accouchements has never had any serious illness, but has always suffered from general debility from overwork and gestation. Was married at seventeen, and has had eight children and four miscarriages. Lived on a farm in North York till six years ago. Since then husband has been a small shopkeeper. Did the usual farm work, sometimes with maids' help, sometimes without, including the dairy work for from six to twelve cows.

Present condition. Spare, "nervous," and debilitated in appearance, apparently hysterical, but very well controlled.

- (1) Respiratory system normal, except for a tendency to bronchitis.
- (2) Muscular and cutaneous systems normal.

(3) Circulation system, normal, except for the quickened pulse of debility.

(4) Genito-urinary system, normal. Began to menstruate at seventeen, and has now at the age of forty-four begun to see signs of climacteric.

(5) Nervous system, temperament is volatile and rather melancholic. Has a well-marked paralysis agitans of head, especially well seen on any excitement—dates from thirteen years ago, after a period of two years incessant care of her mother-in-law, eighty-two years old, who was completely helpless, had to be spoon-fed, and was a great worry to her. Gestation going on at the same time. Until four years ago it was intermittent, but has been since then chronic, though varying in severity.

(6) Digestive system. False teeth worn. Gastric digestion at times much impaired, diet limited to one or two articles, such as bread and tea. Appetite had been very good. Intestinal digestion—no special disorder until ten years ago, while at the fifth month of pregnancy, and during the period of anxiety referred to above in connection with her mother-in-law, aggravated by the presence of workmen engaged in house alteration, who, as usual in the country, boarded where they worked. She was suddenly one day, while engaged in soap-boiling, seized with an attack exactly like many scores of others since that time, and described as follows :

Prodromata. Vague, melancholic feelings, sense of depression, poor appetite, but no special physical signs except pain, the immediate precursor of diarrhoea.

The attack. The pain was crampy, sudden, beginning in the pit of the stomach and descending till felt mainly in the hypogastrium, when a diarrhoeic movement would occur, and the pain begin to subside. Severe depression and nausea, never leading to vomiting, were even more annoying than the pain. Every four or five minutes the need to go to stool would be imperative, and after three or four free liquid—not flatulent or fermentative—stools the paroxysm would cease, having lasted about half an hour. Within an hour or so, she always felt brighter and better than before. There was never much tenesmus, but a tenderness over the lower abdomen, and, in the patient's own words, "the first two or three stools seemed to be just the food I had taken, and the last seemed as if the bowels themselves were coming away." The final movement consisted of glaring yellowish mucus, probably bile-stained, and many varying-sized shreds of whitish membrane, flattened or roundish, one-third to one-half an inch wide, and some four or even six inches long, not unlike pieces of pork rind floating in boiling soap, to use her own simile, or portions of dead round worm from a child. The attack occurred usually near the same hour each afternoon, sometimes at night, rarely in the morning. This would seem to indicate some dependency upon the state of exhaustion,

nervous and muscular, which the patient reached in the later hours of the day. She could never associate it with meals or any irregularity of diet, but often noticed that exposure to cold would precipitate an attack. Sometimes for six or seven weeks she would have an attack at nearly the same hour every day, nutrition, of course, suffering severely. In the intervals of the diarrhoea she was constipated, and, as she says, "hardly ever had a natural movement."

Treatment. Though general treatment had frequently failed before, she showed prompt improvement when put upon an easily assimilable form of iron, one of the latter-day peptonates, with the active principles of cod-liver oil, in a menstruum of wine. She was given also, after each meal, one pancreatic pill (P.D. & Co.) with coating insoluble in stomach. After being under treatment for about two and a half months, she reports permanent recovery, intestinal digestion normal, and her diet list extended to include any of the ordinary articles of food in good amount.

The notes on this disease are but few in our ordinary works of reference. Very varying opinions have been held as to its etiology and pathology. Osler, who may be taken as representing the latest and safest opinion on the subject, says: "The cases are almost invariably seen in nervous hysterical women, or in men with neurasthenia. . . . Microscopically, the casts are, as shown by Sir Andrew Clark, not fibrinous, but mucoid, and even the firmest consist of dense opaque transformed mucus. It is due to a derangement of the mucous glands of the colon, the nature of which is quite unknown." It would seem that in this case, at any rate, since the supplying of the natural ferment artificially acted so well, the mucous secretion was disordered in some way because of the deficiency of the *succus entericus* in some other of its normal constituents. In *The Practitioner* (London) of March last, a study of a series of cases was published by E. M. Light, M.A., M.B., London, under the title "Desquamative Enteritis," an excellent contribution, with a most exhaustive bibliography appended. He states that the removal of the membranous cast shows a mucosa "denuded of superficial epithelium, but presenting no evidence of ulceration or loss of substance." He sums up the diverse opinions of writers as follows: "Trousseau says it has an inflammatory origin. Perrond considers the causations to be nervous. Powell thinks that the mucous products may be derived from the 'exhalents.' H. Bennett, that it owes its origin to its association with chronic enteritis. Golding Bird believes that the colonic follicles are the source of the membranous substances. Grantham attributes the disease to the administration of mercury and aperients, and looks upon struma as a predisposing cause. Arthur Farre believes the formation to be of a confervoid type, an 'oscillatoma,' the result of sporules swallowed by the patient. Sir James Simpson thinks

the casts are the product of a papular eruption of the lower part of the small intestine and colon." He gives a generally favorable prognosis, and as to the main lines of treatment insists upon rest, in bed if necessary; the absolute avoidance of purgatives; restriction of diet to prevent as much as possible the formation of fæces, and the avoidance, therefore, of such foods as bread, eggs, coarse-grained vegetables, etc. He uses warm emollient enemata for constipation, warm olive oil frictions to the abdomen, recommends the wearing of wide flannel roller to support and protect the abdomen, and, as for drugs, gives foremost place to opium, mentioning also the prolonged use of drop doses of liquor arsenicalis—the latter, though he does not say so, probably in the intervals, and the opium during the paroxysm.

A CASE OF TETANY.

BY A. S. FRASER, M.D.,

SARNIA.

FRANK K., journalist, aged 30 years, had been suffering from chronic gastritis for more than a year, when he was referred to me by Dr. Knight, of Wallaceburg. He had severe pain in the stomach, which was nearly continuous; he vomited frequently, and had become very much emaciated. I instructed the patient in the use of a stomach tube, from which he derived great benefit. The pain left, vomiting ceased, and he gained flesh and strength. Using the stomach tube frequently, he had very fair health for about eight months, when the old symptoms reappeared, and notwithstanding frequent irrigation pain again became severe, and the vomiting very annoying. The patient appeared to have, at times, a craving for the most indigestible food that could be had. One day he ate a quantity of fried mushrooms, and although his wife, who partook of the same food, suffered from a sharp attack of diarrhœa in consequence he did not appear at all affected. Four days afterwards, however, having some gastric discomfort, he used the stomach tube, and brought away a number of pieces of mushroom, which did not appear to have been at all affected by their prolonged stay in the stomach. In about an hour after having used the stomach tube on this occasion, it was noticed that his articulation was imperfect, and that he had slight spasms of the facial muscles. Immediately after this there occurred a strong contraction of the flexors of the hands and feet, extending rapidly to those of arms and legs. It was noticed that the hands were not clenched, but the thumb was

turned inwards; the fingers were straight, but strongly flexed at the metacarpo-phalangeal articulations. In about a minute the spasms ceased, but returned after a few minutes with greater violence, subsiding after one or two minutes and again returning. Four attacks occurred within an hour, each beginning in the extremities, but involving more muscles than the one preceding it. During the fourth attack dyspepsia was extreme, and after it had subsided the patient was in such a state of collapse that those about him thought he was dead. He slowly rallied, and, as the spasms were commencing for the fifth time, a hypodermic injection of a quarter of a grain of morphia was administered. The muscles at once relaxed, and there was no return of the spasms. The intellect remained quite clear throughout. As the patient felt the last attack coming on, he said, "Another will finish me." In a few days he was able to go about and attend to his business. His health failed so much during the next few months, that he decided to go west, in the hope that a change of climate would benefit him. Although in a very feeble state he succeeded in getting as far as Montana, where he remained for a month. Returning at the end of that time, it was evident that his end was approaching. He had persisted in the use of the stomach tube, and had occasionally slight spasms of the extremities, but not sufficient to give him any annoyance. Five days after the patient's return the tetany again appeared, the spasms being confined to the extremities, and continuing until his death, which occurred three days later. The stomach tube had not been used for a week when the spasms came on for the last time.

A *post-mortem* examination of the stomach showed that the capacity of the organ was normal, but the walls were very thick, particularly in the pyloric region. This thickening was found by microscopic examination to consist entirely of an increased amount of connective tissue in the sub-mucous coat. The epithelial lining of the stomach had almost entirely disappeared; no examination was made of the other parts of the body.

I am indebted to Dr. Knight for notes of this case, which was under his care for more than two years. Several physicians were consulted during the progress of the case, and the patient was carefully examined repeatedly, yet no complications, apart from the tetany, were ever discovered.

It is said that tetany occurring in gastric disease is due to the absorption of toxic matter from the stomach, and that the spasms are likely to come on after the stomach has been washed out. If this is true, it is somewhat remarkable that the removal of decomposing mucus and undigested food, also probably in a state of decomposition, should be followed by the absorption of poisonous matter. In the case above described it is interesting to note that although tetany, when associated with gastric

disease, is said to be always fatal, this patient, having had a very severe attack, did not appear, after the immediate effect had passed, to be any worse.

Another curious circumstance was the sudden stoppage of the spasms by the prick of the hypodermic needle, as the effect was so instantaneous that it could not have been due to the absorption of the morphia; and it might be argued from this that whatever may be the nature of the toxic agent causing the spasms, its action probably consists in holding in abeyance the inhibitory mechanism, rather than increasing the irritability of the motor centres.

LOCOMOTOR ATAXY IN A GIRL OF FOURTEEN, WITH PROBABLE MODE OF ORIGIN.

BY W. B. THISTLE, M.D., L.R.C.P. LOND.,

TORONTO.

E B., a well-grown, fairly healthy-looking girl, was admitted to Victoria Hospital under my care on account of difficulty in walking.

The following history was obtained from the mother: The parents are living and quite healthy. Brothers and sisters are all in good health, and none of them has suffered from disease or nervous symptoms of any kind. The patient has never been very strong, and has always been somewhat nervous; when excited she trembled, and had slight twitching movements. Until May, 1891, she enjoyed good health, but at that time had what was said to be measles, accompanied by very sore throat, and followed by desquamation of the skin, and later by much swelling of hands and feet. Shortly after this she complained of dizziness, loss of sight, and abdominal pain. However, these symptoms soon passed away, but were followed by very considerable loss of power, so much so that she was for a time quite unable to walk or stand up, and it was noticed that there was much weakness of the hands and she had great difficulty in grasping or retaining hold. After some months the power gradually returned and she was again able to walk, but there still remained a peculiarity of gait and much uncertainty. During this time she frequently had cramp in the legs, but at no time has there been any severe pain. Her general health has been fairly good. The mother had noticed no other symptoms.

Present condition. Patient is well nourished, but somewhat anæmic. Muscles are everywhere round and firm, with the exception of those of the hands; in these there is evidence of fairly extensive atrophy, and the hands have the peculiar cold, clammy feeling usual in atrophied parts. The gait is very suggestive. The feet are lifted high, and carried forward in an

irregular, uncertain sort of way, and finally brought down flat on the floor. The toes are extended to the full at the metatarso-phalangeal articulation, but the distal phalanges are strongly flexed, producing the peculiar arching of the toes seen in the typical tabetic foot. There is a tendency to stagger from side to side when walking, and this is much increased when turning quickly. On attempting to stand with the eyes shut and the feet drawn together, she invariably staggers and falls. The knee-jerk is absolutely gone on both sides, but the cutaneous reflexes are preserved. Sight is good, and there is full power of accommodation. Reflex to light is active. No bladder or rectal symptoms. There is no co-ordination shown when the patient attempts to touch a given point—bring the fingers together quickly, or place her finger on her nose. Tactile sensibility is somewhat impaired. Sense of temperature is normal, and painful impressions are received as in health. She complains at times of numbness in the legs, and has cramps, but at no time has there been severe pain.

Diagnosis. There would seem to be no doubt as to the existence of a lesion in the posterior columns, since there is ataxy with complete loss of knee-jerk and slight loss of tactile sensibility. The case is therefore locomotor ataxy. The loss of muscle sensibility, giving rise to absence of knee-jerk and ataxy, shows that the degeneration affects to a very great degree the posterior median columns; while the very slight loss of tactile sensibility, together with the fact that the cutaneous reflexes are preserved, indicates that there is very slight affection of the postero-external columns. The fibres for the conveyance of painful impression and sense of temperature, being situated in the lateral columns, escaped altogether.

The earlier symptoms following the scarlet fever—for without a doubt it was scarlet fever and not measles—I interpret in this way: The loss of sight, headache, etc., were no doubt uræmic, because associated with diminished urine, dropsy, and occurring during convalescence from scarlet fever. Still later there is a history of extensive paralysis coming on suddenly and gradually clearing up; this, together with the fact that there is at present extensive atrophy on both hands, makes it clear that anterior poliomyelitis succeeded the uræmic symptoms.

Regarding the causation of the posterior sclerosis, since it followed directly the poliomyelitis, I am inclined to look upon it as an extension of the inflammatory process in the slow form of a degeneration from the anterior cornua to the posterior columns. It is a recognized fact that the reverse condition does occur when, in the course of locomotor ataxy, there is extension of the degeneration to the anterior cornual cells, and as a result progressive muscular atrophy. Again, in acute anterior poliomyelitis, it is well known that this disease is at times followed by spastic paraplegia, as a result of extension from the anterior cornua to the pyramidal tracts.

The rarity of locomotor ataxy of spinal origin in early life, together with the absence of marked sensory symptoms, makes one think of the hereditary form of ataxy said to be the rule in children; but the absence of hereditary syphilitic taint, the freedom of the child from any of these symptoms until subsequent to the scarlet fever, the non-appearance of similar or any nervous symptoms in other members of the family, and the absence of the peculiar speech and eye defects, make it impossible to term it Friedreich's disease.

Progress of Medicine.

MEDICINE

IN CHARGE OF

W. P. CAVEN, M.B. Tor.,

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

THE PÉTRESKO METHOD.

In an editorial in *Medical Record* on "the Therapeutics of Pneumonia," the Pétresko method is thus spoken of:

It is a treatment devised by Dr. Z. Pétresco, professor of therapeutics at Bucharest. The plan was first recommended in 1883, after it had been tried for two years. In the same year, Dr. Brailov, a pupil of Pétresco, gave a favorable opinion of the digitalis treatment. Pétresco again wrote upon this subject in 1884, reporting one hundred cases. Another article was written upon it in 1886 by Dr. Pacleano, reporting one hundred and eighty-two cases. In response to some criticisms, Pétresco had made an analysis of the digitalis used in Bucharest, and found it as strong as preparations used in Berlin, Paris, and Strasburg. In 1887 M. Antonin published a doctorate thesis giving the results of Pétresco's treatment in all his cases of pneumonia from October, 1886, to July, 1887. He states that the mortality was reduced to 1.21 per one hundred among 577 cases. Pétresco reported the results of his treatment again at the Therapeutical Congress at Paris in 1888. Naturally, he was rather severely criticized by the eminent gentlemen who heard him.

In 1880, one of Pétresco's pupils, Dr. Constantinesco, published a thesis in which he reported 816 cases treated, with a mortality of 2.06 per one hundred.

After eight years of persistent work, Pétresco succeeded in getting his method tried elsewhere. In 1891 Dr. Filk, of Vienna, reported sixty-one cases treated by large doses of digitalis, with a mortality of only one.

The previous mortality had been 15 per 100. From the same city, however, there came a slight set back to the practice. Professor Drasche used the drug in doses of three to four grammes daily—doses smaller than those recommended by Pétresco—and got unfavorable results. In April, 1892, Dr. R. Hoepfel, of Barnan, reported good results from the high dosage.

Several Paris physicians have announced their general belief in the harmlessness of digitalis in very large doses, but give no specific reports upon its use in pneumonia.

Such is the state of the case at present. It will be seen that Pétresco is still backed up almost entirely by his own statistics, because his method has not been extensively tried elsewhere. Still, he has made out a very good case for himself, and has at least proved that the pneumonia of Bucharest is best treated by digitalis.

The method itself is simple. The patients are given from four to six grammes (sixty to ninety grains) of powdered digitalis daily. The medicine is administered every one or two hours in the form of an infusion.

CURE OF ANEURISM BY BACELLI'S METHOD.

Pritchard reports a case of Bourget, at Lausanne, Switzerland, in which an aneurism of the descending aorta was treated by this method. It had passed by pressure-absorption the body of a vertebra and two ribs, and formed a tumor between the spine and the scapula. A watch-spring 2mm. broad and 37 ctm. long, with a spiral 5 ctm. in diameter, after being boiled in hydrochloric acid (to sterilize it and to form a film of ferric chloride to start the coagulation process), was introduced through a small slit into the sac. The slit was then closed. The subjective symptoms were relieved. One month later, the tumor was found by exploratory puncture to contain no blood, and the pulsations had increased in extent and intensity. Improvement at time of report was steadily progressing.—*Medical Record*.

GASTRIC CRISES IN FLOATING KIDNEY.

The gastric crises which sometimes occur in cases of floating kidney were recently discussed at a French medical society. Dr. Mathieu had observed patients in whom there had been severe attacks of vomiting ten or twelve times a day for a fortnight or even more. There was a strong resemblance to some of the gastric crises of locomotor ataxia. There was severe abdominal pain. In a few cases there was enough gastric dilatation to suggest constriction of the pylorus. It was very possible that the symptoms resulted from a temporary displacement of the kidney, and more or less torsion of its pedicle. The best treatment for floating kidney he had found to be rest and the abdominal bandage, with a large and soft pad over the kidney. At the time of the lighter gastric crises he had used

chloroform, cannabis indica, and a milk diet, with some success, but for the more severe cases he had not found much relief by drugs. Of surgical attempts to fix the kidney, he believed there had been twenty-six successes and eleven failures. Dr. Legendre agreed that the misplaced kidney probably pressed sometimes upon the pylorus, and by that means excited the vomiting, but he did not think the vomiting could always be stopped by getting the kidney into its right place again. Dr. Guyot had observed for forty years cases of floating kidney, but had not found gastric dilatation or fits of vomiting. Dr. Rendu gave an account of the case of a lady in whom there had been many gastric crises. At first they were considered to be due to a pre-ataxic condition; later, when they were accompanied by jaundice, to gallstones; and finally, when the jaundice no longer recurred, to floating kidney. A surgical operation to fix the kidney was contemplated, but before it was performed the crises ceased completely, and the problem of the origin of the symptoms remained unsolved.—*Medical Record*.

PRIMARY TUBERCULOSIS OF THE TONSIL, CHEEKS, AND LIPS.

Dr. Lloyd recently showed a case of this kind at a meeting of the Johns Hopkins Hospital Society. The case was of interest from the fact that the disease, as it appeared upon the face and the mucous membrane of the mouth, resembled somewhat a syphiloderm. The history of the case is briefly as follows: Six years ago she had a fibroid tumor of the uterus, and she consulted a physician, who placed her upon iodide of potash and mercury for the purpose of causing absorption of the growth. She has thus been for the past six years on the iodide and mercurials. After taking the iodides for three or four years an eruption appeared over all the body, resembling, as she states it, smallpox. Two years ago an ulcer appeared upon the right tonsil, and an irregular, soft, small ulcer appeared on the inside of the left cheek. Half a year ago the ulcer spread to the upper lip, which became greatly swollen and extended down to the lower lip. We saw her a week ago for the first time, and our diagnosis lay between specific trouble and epithelioma. She was seen by three throat specialists, and they thought it a cancer of the tonsil, which it resembles closely. The skin lesion looked like specific trouble. A section of skin was taken out and examined by Dr. Barker, who found it to be tuberculosis. This variety of tuberculosis of the skin is exceedingly rare. In four thousand *post mortems* made by Chiari, only five cases of tuberculosis of the skin were found. These occurred in the regions where the mucous membrane and the skin come together, on the lips and about the anus, and in one case on the skin back of the ear. Any one might make a mistake in diagnosing such a case, and had we not made a micro-

scopical examination and stained for the bacilli we could never have diagnosed it correctly. Upon the side of the right cheek there was a large patch resembling rupia, but upon removing the crust the lesion looks like tuberculosis. The patient has had many of the symptoms of syphilis—rheumatic pains, falling out of hair, etc.—*Medical Record*.

PULMONARY EMBOLI FOLLOWING MERCURIAL INJECTIONS.

Interstitial injections of mercury, so largely used at present in the treatment of syphilis, are sometimes dangerous. Dr. Blaschko has reported two cases in which the injections of mercury were followed by pulmonary symptoms. In the first case, the patient complained of thoracic pain, coughed, and had accesses of oppression. On the day after the injection, the respiration became difficult, and the patient coughed bloody sputa. The second patient also complained of pain in the side, coughed, expectorated bloody sputa, and had a little fever. The symptoms in both cases disappeared in about three days. In a third instance, the patient had violent attacks of cough after the injection. These symptoms are explained by the author as being due to emboli caused by the paraffin employed as a vehicle for the mercurial preparations, which are insoluble, and are only suspended in the liquid. The writer believes that the mercurial injections give the best results in the treatment of syphilis, but that they must be administered by themselves, as in this manner they produce no untoward effects. The injections should not be so frequent in individuals affected with pulmonary troubles, especially phthisis.—*Therapeutic Gazette*.

THE DIAGNOSIS OF ASIATIC CHOLERA.

This was the subject of a few remarks by Dr. William H. Welch. The diagnosis of Asiatic cholera is of great interest, and the undertaking is one of much importance. The importance of the diagnosis varies at the time of the epidemic. It is important to make the diagnosis of the first case, or of the first few cases, as early as possible. The recognition of this is essential for preventing the epidemic. Then even after the epidemic has broken out, it is desirable to make the diagnosis early because the treatment should begin as early as possible, as it is then more effective. Nevertheless, it is not a bad mistake if cases of diarrhoea are called Asiatic cholera, for other diseases are often called cholera.

The means at our disposal independent of the existence of an epidemic are the symptoms and the *post-mortem* appearances. The diagnosis after death is an important pathological aid of the disease. Experience during the last epidemic of cholera at Hamburg and elsewhere is conclusive that there is no diagnostic symptom or pathological lesion of cholera; there is

only one thing, and that is the determination of the organism, the comma bacillus of Koch, in the discharges. When we consider the different classes of cholera, it is almost impossible to classify them. We have on record pathological studies of hundreds of cases, and we find that in eight to ten in every one hundred the cholera bacillus has been found in the stools of healthy persons who have had to do with those sick, those with no symptoms of the disease and with no diarrhoea, but who are with the sick and in the hospitals. So far, it has only been found in healthy persons who are near the sick. Then there are those cases of the Asiatic sort with diarrhoea and in no way differing from ordinary diarrhoea, but it is simply cholera without vomiting, in which the cholera bacilli are in the stools. These are not diagnostic without the bacilli. Then there are those cases of cholera, that is, cases that present more or less the symptoms of cholera, but do not pass into the asphyctic or algid condition of the disease, with diarrhoea, rice-water discharges, vomiting, cramps, complete suppression of urine, absence of the radial pulse, and aphonia. This is cholera. Of these cases there should be a very strong suspicion. The term is applicable only to a minority of the cases. According to the reports from Hamburg, we must not expect to have typical rice-water stools; they are more often absent than present. They have a color, and frequently contain some bile, and are green or yellow. In the asphyctic stage the disease is more characteristic; there is complete suppression of urine and the urine secreted in the algid stage is called the last urine, and no more can be obtained with a catheter, and there is no more urine until this stage passes away.

The prognosis depends upon this stage. If it lasts seventy-two hours, it is said to be hopeless. The character of the first urine passed after this stage is awaited with great interest. It always contains albumin and casts, and the prognosis is always more favorable the larger the number of casts, for they must be washed out. The absence of the radial pulse is another symptom of importance. There is no correspondence between the strength of the heart-beat and the absence of the pulse, indicating that this absence of the radial pulse is, in part, caused by the spasmodic contraction of the blood vessel. The heart is often quite strong. There is loss of voice or hoarseness; extreme coldness of the extremities, with the internal temperature normal or a little above. There is often six to eight degrees difference between the temperature in the axilla and that in the vagina or rectum. There is sinking in of the face, and the eyes take on that peculiar color which is described in the old books. Exactly these same symptoms may occur in cholera nostras, but an absolute diagnosis cannot be made from these alone. The disease may go into a typhoid state and end there. The fulminating variety is where the symptoms come on with

great rapidity. The impressions from the cases at Hamburg are that death was due to intoxication, and not so much to draining away of the body fluids.

There is nothing in these symptoms, taken by themselves or together, to constitute a diagnostic landmark, nor in the *post-mortem* appearances that are decisive. All the usual *post-mortem* appearances are found in those cases, and the results are not pathognomonic. We cannot make a diagnosis of Asiatic cholera from the *post-mortem* appearances. Koch's comma bacillus is the only true diagnostic point, just as the tubercle bacillus in tuberculosis. It is a difficult work, more so than the recognition of the tubercle bacillus, and it is doubtful if the general practitioner, even if he should have the knowledge, would have the time to go through the methods necessary to make the diagnosis. We first make cover-slip preparations from the rice-water stools, taking up the large rice lumps, and if they contain a large number we may be sure, but if only a few are present it is not safe to make a diagnosis in this way. There are probably one or two in every city capable of making a diagnosis from the stools, and who are able to study the organism suspected. More frequently cultures are made, and that requires twenty-four to forty-eight hours to make the diagnosis, but sometimes it can be made immediately, and it is positive. The cases where these methods have failed are very very few, and those of failure are regarded as curiosities. He should be prepared to make examinations at the Johns Hopkins Pathological Laboratory for any physician, and if any one should have a suspicious case he may send a specimen of the stools in a wide-mouth bottle tightly sealed with paraffin or sealing-wax, and this may be sent by mail with safety and will last a long time.—*Report of Medical and Chirurgical Faculty of Maryland in Medical Record.*

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

ARSENIC IN RODENT ULCER.

Lassar, of Berlin, reports two cases of rodent ulcer cured by arsenic, given both internally and by hypodermic injection, without any local treatment. Two to three drops of Fowler's solution were given three times a day, and a small syringe full of a one per cent. solution of arseniate of soda at a dose, about twenty injections being made during the course of the treatment.—*Berliner Medicinische Wochenschrift.* W.L.

URTICARIA.

R.—Chloral hydrat.,
 Pulv. camphoræ,
 Pulv. gummi arabic.....aa 3j.
 Triturate to liquefaction and add
 Cerat. simplicis..... 3j.
 M. S. : Apply topically.

—*L'Union Médicale.*

BROMIDE OF STRONTIUM IN VOMITING.

Dr. Justus Coronedi reports a number of cases to prove that bromide of strontium is an excellent remedy against vomiting, the only failure being mechanical vomiting in the course of a case of carcinoma of the pylorus and liver. He gave bromide of strontium (Merck) fifteen grains, one to three times a day, either before or immediately after eating. He also found it very effective in allaying pain in the stomach. Professor John Dougall, Glasgow, after all other remedies had failed, administered bromide of strontium to a woman who had suffered for a long time from chronic gastritis with frequent vomiting. He gave thirty grains three times a day. Improvement began after the first dose, and in fourteen days the woman was cured.

Fedorow highly recommends *hydrastis canadensis*, fluid extract, twenty drops four times a day, in inveterate vomiting of pregnancy.—*Therapeutische Monatshefte*, June, 1893.

W.L.

ALUMNOL.

A new astringent antiseptic, occurring as a fine white non-hygroscopic powder, soluble in water, alcohol, and glycerine, but not in ether. Recommended strongly by Heinz and Liebrecht in $\frac{1}{2}$ to 2 per cent. solution for washing suppurating surfaces and wounds ; 10 to 20 per cent. for small abscesses and fistulæ where local stimulation is required ; 3 to 6 per cent. salve for torpid chronic ulcer ; also in dermatology, gynecology, laryngology, ophthalmology, and obstetrics. Dr. Chotzen regards it as a specific in gonorrhœa. He gives an injection four times a day of a 1 to 2 per cent. solution in water, and finds that the gonococci disappear in three to six days, after which he gives one injection each day. It causes no pain. He also recommends it in *ulcus molle*, *balanitis*, *eczema*, *acne*, *urticaria*, *sycosis*, *favus*, *psoriasis*, *seborrhœa*, *erythema exudativum*, *prurigo*, etc. It has the advantage of being very moderate in price.—*Therapeutische Monatshefte*.

W.L.

THE TREATMENT OF CHLOROSIS.

Dr. Duclos (*Revue Générale de Clinique et de Therapeutique*) regards true chlorosis as consisting essentially in an auto-infection of intestinal origin. He insists upon a daily evacuation of the bowels, obtained not by purgatives, but by injections, either simply of water, perhaps with glycerin or oil, or slightly saline, aiming to secure a spontaneous evacuation at the same hour; or suppositories of soap, cacao-butter, or glycerin can be used; if simple means fail, then castor oil can be employed; avoiding, however, the salines. Iron is important, of which the ammonio-citrate is placed at the head; other forms may be used, but the simple will be always the best—to be always given with the meals. The patient should eat whatever the stomach will accept and digest without constipation or diarrhoea, but an exclusively animal diet should not be allowed. The activity of the skin must be maintained by warm general rain douches, or by friction. Outdoor exercise is prescribed. Deep inspiration of air is necessary, or, in special cases, short but repeated inhalations of oxygen, either pure or mixed with a definite quantity of air.—*American Journal of the Medical Sciences.*

EXPERIMENTS WITH PIPERAZIN AND OTHER URATE SOLVENTS.

Dr. William A. Meisels, in the Budapest Pharmacological Institute, first experimented on pigeons by tying the ureters in order to get a uric acid sediment on the peritoneum of the liver and the endocardium and pericardium, but found that the birds died too soon. He then gave neutral chromate of potash hypodermically, and recommends very strongly this method of producing a separation of uric acid in the system, especially as it was found in the joints. A pigeon was given 0.01 grammes of neutral chromate of potash in a 2 per cent. solution hypodermically every day, and 0.20 grammes of piperazin by the mouth. At the section, no uric acid was found on the serous membranes, while a control bird exhibited on section a whitish parenchymatous inflammation of the kidney, and the tubuli recti completely stopped up by uric acid concretions. Similar experiments with borate of sodium and carbonate of lithium caused the investigator to arrive at the following conclusions:

(1) Piperazin is able to prevent the occurrence of urate deposits in birds, and to dissolve the already existing deposits. Piperazin has no influence on the ordinary functions of life, nor on digestion. It does not appear to have any diuretic qualities.

(2) Carbonate of lithium, administered by the mouth, is not able to dissolve the urate deposits in birds, and, in contradistinction to piperazin, exercises an injurious influence.

(3) Sodium boracicum ; as also

(4) Sodium phosphoricum possesses no power either to dissolve urate deposits or to hinder their occurrence in birds.

(5) Piperazin and lithium carbonicum are able, even in very weak solutions, to dissolve uric acid and uric acid calculi, while biborate of soda and phosphate of soda have not this power.—*Therapeutische Monatshefte*, May, 1893.

W.L.

• CAFFEINE IN ALCOHOLICS. BY CZARKOWSKI.

From personal observation on four cases, Czarkowski considers the use of caffeine to be contraindicated in alcoholic subjects. In all his cases there was cerebral excitation, that disappeared on stopping the use of caffeine. The first, suffering from mitral insufficiency and œdema, showed signs of agitation with "Phumeur gaie" after having taken two grains of the drug. On discontinuing the drug the patient became quite melancholic, and retained no remembrance of what had gone on during the period of excitement. The second case had nephritis. Caffeine was given to him in 20 centigram doses. After the fifth dose, cerebral excitement and hallucination, followed by loss of consciousness, which lasted several hours, came on. In the third, suffering from typhus fever, after several 60 centigram doses, there developed violent delirium with destructive tendencies. He retained no recollection of his condition after his recovery. The author comes to the conclusion that caffeine should be given to alcoholic subjects only with the greatest care, and then with instructions to attendants to discontinue the administration on the least manifestation of excitement.—*Bul. Gén. de Thérapeu.*

J.A.A.

THE EFFECTS OF SOME ANTISEPTIC SOLUTIONS ON THE COMMA BACILLUS.
BY G. G. BORCHOFF.

The author has studied the effects of the following solutions on Koch's bacillus :

(1) Corrosive sublimate, 1 in 1000.

(2) A mixture of 1 pint of sulphuric acid and three parts carbolic acid, of the strength of 6 in 100 of water.

(3) A mixture of quick lime and water, 20 in 100.

(4) A solution of carbolic acid, 5 in 100.

The following procedure was used :

He put equal parts of the antiseptic solution and choleraic dejections that contained the bacilli into a test tube. After a certain exposure he took samples to make gelatine plate cultures, with the following results :

(1) The corrosive sublimate, unless it came in contact directly with the microbe, had a very slight germicidal power.

(2) The lime mixture killed them in the majority of cases ; but the mixture had to be well stirred up with the dejections.

(3) The mixture of sulphuric acid and carbolic acid, as also the carbolic acid solution, always killed the bacilli, and this without having to shake up the mixture.—*Bul. Gén. de Thérapeu.* J.A.A

NOTES ON NEW REMEDIES.

Ichthyol.—Still reported useful locally in erysipelas, eczema, rheumatism, metritis, parametritis, ovaritis. A fatal case occurred from applying a thirty-three per cent. solution to a freshly curetted uterine cavity.

Iodoform is said to be disguised by camphoid, cumarin, terpineol, menthol, or essential oil of coriander.

Methylene blue colors the urine and causes some strangury, but no albuminuria. A little nutmeg relieves the strangury. It is effective in malaria, but not superior to quinine. It exerts no action in tuberculosis, and may be used to diagnosticate it from malaria. A ten per cent. solution was used locally for diphtheria successfully, and in cystitis it has been praised.

Naphthalin for all kinds of intestinal parasites. One gramme removes a tape-worm entire. Castor oil is given after it—to adults, with it—to children. An ounce burnt in the bedroom on each night cures pertussis in two or three nights. It is so irritant to phthisis that it may appear diagnostic.

Naphthol is best used in the form of naphthol camphor, formed by heating one part of beta-naphthol with two parts of camphor, until a homogeneous melted mass forms. Air and light decompose it. It is injected into tuberculous glands, and other tuberculous nodules, joints, cavities, abscesses, etc. It is used undiluted.

Paraldehyde has succeeded in tetanus and in maniacal insomnia in mild forms. It is probably diuretic.

Pental, an anæsthetic, requires about $5\frac{1}{2}$ fluid drachms to produce anæsthesia for minor work. It is not so deep an anæsthetic as that of ethyl bromide, but safer, and has no bad after-effect. Sensation is lost before consciousness.

Phenacetin has had its best field in influenza. It is safer than antipyrin or acetanilid, and more enduring.

Piperazine sustains its place as a solvent of uric acid, and has been applied locally with success in one per cent. solution to gouty sores.

Resorcin has gained favor in diarrhoea, gastritis, gastric ulcer, gastric cancer, for insomnia of nervous excitement, typhus and phthisis, pruritus, locally for ulcers, and for pertussis.

Salicylamide has less taste than salicylic acid, is more soluble, acts quicker, in smaller doses, and is more analgesic. Dose 3 to 5 grains several times a day.

Salol has been used with success in dysentery, infantile diarrhoea; many report favorably in cholera, chronic cystitis, and gonorrhoea. It is used as a pill coating, insoluble in the gastric juice; made of salol 4 parts, tannin 1, and ether 20. This is varnished on in several coats.

Salophen does not decompose into carbolic acid, as does salol. It is very effectual in acute rheumatism, and does not weaken the heart, or produce albuminuria or smoky urine.

Somnal fails as a general hypnotic, but is useful in the insomnia of convalescence, pertussis, laryngeal spasm, asthma, chorea, and nervous cough. It is safe and uniform in action.

Sulphonal has won a place in treating the insane. A very important hypnotic.

Terebene, an agreeable antiseptic and deodorizer. A five per cent. solution is a good surgical dressing. The vapor is of use in bronchial affections and phthisis.

Urethan, a mild hypnotic, especially useful for children.—*Times and Register*.

THE EFFECTS OF MASSAGE. BY DR. JAWADSKI.

The author has studied experimentally on dogs the rapidity of absorption of toxic substances by the tissues under the influence of massage, and has come to the following conclusions:

(1) Massage (friction), in the direction of or towards the heart, accelerates the absorption of liquid substances introduced subcutaneously.

(2) Massage augments considerably the effect of substances introduced hypodermically. From a therapeutic point of view, this fact derives some importance, because with a small dose of a drug accompanied by massage we can obtain the same effect as with a larger dose, not using massage.

(3) The longer the massage is practised, the more rapid is the absorption.

(4) The quantity of fluid injected has very little influence on the rapidity with which absorption takes place during the practise of massage.

(5) Massage practised on the side opposite to the one in which the injection is made, along with the massage on the injected side, does not increase the rapidity of absorption any more than if massage was done on the injected side only.

(6) The section of a motor nerve has no influence on the rapidity of absorption.

(7) Massage produces a dilatation of the blood vessels of the organ operated on.

(8) After section of a sciatic nerve, the fluid injected beneath the section is absorbed more rapidly.

The effects of massage on absorption does not depend on a constriction, nor on a dilatation of the blood vessels, as a result of stimulation of the peripheral sensory nerves. Massage cannot, then, but have a mechanical effect. It produces quite mechanically a dilatation of the blood vessels, and drives the blood from the organ operated on into the general circulation, and in this way is it that it contributes or assists more rapid absorption.—*Revue Chirurgicale*.

J.A.A.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to the Toronto General Hospital.

MENORRHAGIA and metrorrhagia have been controlled by the hypodermic use of atropine in one two-hundredths of a grain dose, after other hæmostatics had failed.—*Dmitriuff*.

LABOR pains are brought on, Freund claims, by galvanism applied to the mammæ (cathode), and abdomen (anode); five to seven milliampères being employed.—*New York Medical Record*.

THE QUANTITY OF LOCHIA.

At a meeting of the Obstetrical Society of London, held May 3rd (*British Medical Journal*), Dr. E. Giles gave the result of investigations on the quantity of lochia after labor. The method employed was described, and sources of error discussed. The conclusions derived from observations on sixty cases were as follows: (1) The average normal quantity of lochia is about 10½ ozs.; (2) the duration of the discharge is, on the average, nine or ten days; (3) the degree of "parity" does not influence the quantity; (4) non-suckling does not increase the discharge; (5) the quantity is generally greater in younger women up to the age of twenty-five; (6) the weight of the child has a slight, and that of the placenta a well-marked, influence, the quantity increasing with the weight of the placenta; (7) the quantity increases with the amount of hemorrhage at the time of labor; (8) the lochia are more abundant in the case of those who habitually menstruate profusely; (9) the quantity is generally greater in the case of women of darker complexion.

ALBUMINURIA IN RELATION TO PARTURITION.

Aufrecht (*Centralb. f. klin. Med.*, June 3rd, 1893) records some investigations in which the urine was examined before and after labor, all possible sources of contamination being avoided. Of 32 cases none had albumen before labor or just after the commencement of the pains, but in 18 albumen, varying in quantity from 1 to 2 to $\frac{1}{4}$ pro mille, was found after labor. In all these cases the albumen disappeared in twenty-four hours. Epithelium, but no casts were present. It is concluded that labor, or rather the pains, cause the albuminuria by producing some stagnation in the venous system, including the renal veins. Thus the urine should be examined before labor, and if albumen is present the case should be watched, as an increase is likely to occur during the labor. If eclampsia appears at the beginning of or during the pains, the labor should be hurried on as much as possible, as, according to the author's experience, renal disease with albuminuria is without exception the cause of eclampsia. The function of the kidneys is further compromised by long-lasting pains, and the danger to the mother increased. Where artificial delivery cannot yet be effected, chloral is most suitable. Again, albuminuria and cylindruria are separate processes, the latter having nothing to do with the transudation of albumen through the renal vessels. Casts are the product of inflammatory irritation of the renal epithelium.—*British Medical Journal*.

ANÆSTHETICS IN LABOR.

Dr. E. P. Davis contributes an article on this subject in the *Philadelphia Polyclinic*, which also appears in abstract in the *Therapeutic Gazette*. He thinks the use of anæsthetics is clearly indicated in the majority of cases of labor. He considers that, when properly administered, they do not produce any depressing effect, even when valvular lesions of the heart are present. There is in many cases a considerable amount of conscious suffering, independent of the uterine contractions, which causes cerebral inhibition, and this, in turn, stops temporarily the muscular contractions of the uterus. An agent which removes such inhibitory action of the cerebrum leaves the ganglionic centre of the spinal cord free to furnish the uterus with the normal stimulus essential for rhythmical contractions of the uterine muscle. The element of shock in prolonged and difficult labor may be lessened by the skilful use of anæsthetics. A further advantage gained is the diminished tendency to laceration of the birth canal of the mother. He has found that, in certain difficult cases, when a slight disproportion between the foetus and the pelvis exists, the anæsthetic has often prevented the necessity for the use of the forceps. He admits that the administration of the anæsthetic to the extent of pro-

ducing a profound anæsthesia is dangerous, because it favors depression and post-partum hemorrhage. As a rule, he prefers chloroform; but, in dealing with post-partum hemorrhage when manipulative interference is required, and in abdominal sections for any complication of parturition, he chooses ether.

I agree with most of the author's conclusions; but I have observed that in a certain class of patients the administration of chloroform, however carefully it may be done, retards labor to a serious extent, and causes a certain amount of post-partum hemorrhage. For these reasons I look upon its indiscriminate routine use in labor, as is the custom in certain quarters, with considerable dread.

A.H.W.

THE INFLUENCE OF ERGOT ON THE INVOLUTION OF THE UTERUS DURING THE LYING-IN PERIOD.

In the *Lancet* for November 19th, 1892, Mr. Herman contributes the following article:

In the "Transactions of the Obstetrical Society of London," vol. xxx., for 1888, will be found a paper by C. Owen Fowler and Mr. Herman, in which observations are detailed pointing to this general conclusion: "That the administration of an ergot mixture during the first fortnight of the lying-in period appreciably increases the rapidity with which the diminution in size of the uterus goes on." This conclusion was reached by comparing the average rate of involution (*a*) in a number of cases, taken without selection, in which ergot was given, with (*b*) the average rate of involution in an equivalent number of cases, also taken without selection, in which ergot was not given. In the *Annales de Gynécologie*, vol. xxix., for 1888, p. 175, is published an investigation by Dr. Emile Blanc, of Lyons, conducted in a very similar way, but which led him to the conclusion that "ergotine administered during the first five or ten days of the lying-in period exerts no favorable influence on the uterine involution." Dr. Blanc's research was quoted at the time in several English journals.

These two investigations seem to contradict one another. Mr. Herman desires to point out that they do not; but that, on the contrary, they confirm one another, and show the real value of ergot in the lying-in period. The reason that Dr. Blanc's conclusion differs from that of Dr. Fowler and Mr. Herman is this, that he chose the cases in which to test the effect of ergot. He took only cases of "normal delivery at full term, excluding premature labors, cases with febrile disturbance, and all cases needing any intervention" (p. 177). These cases excluded are just those in which the causes known to hinder involution are present. Dr. Fowler and Mr. Herman took cases without any selection, and therefore among theirs were

included cases in which the cause of subinvolution were present. Dr. Blanc's research shows that in a normal lying-in the uterus completes its involution as well without ergot as with it. The paper by Dr. Fowler and Mr. Herman shows the beneficial effect of ergot in counteracting the causes which retard involution. Dr. Blanc's paper contains nothing in opposition to this view; on the contrary, he expressly says, "Against secondary hemorrhage the drug maintains its position. Its action is the more efficacious the nearer the delivery." The practical conclusion is that while in a perfectly normal lying-in ergot is not required, yet when any cause of imperfect involution is present, or suspected to be present, ergot, given throughout the lying-in period, will counteract its influence, will promote involution, and should be given.—*Therapeutic Gazette*.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

APPENDICULAR COLIC.

Dr. J. F. Binnie, of Kansas City, in the *Annals of Surgery*, in reporting a case of appendicular colic, says:

Cases of colic of the vermiform appendix must be of by no means rare occurrence, but owing to a variety of circumstances they have been rarely described or diagnosed. One of the reasons why we have not heard more of this trouble is that cases of it have been mistaken for or classified as appendicitis, typhlitis, or perityphlitis.

Chronic catarrh sometimes partially or completely closes the opening of the appendix into the cæcum, and the efforts of this organ to expel its contained mucus gives rise to cramp-like or colicky pains.

That the vermiform appendix has great expulsive power is shown by a case mentioned by Dr. Parker Syms, in which "during oöphorectomy the vermiform appendix came into view, and, although healthy, was removed

because of its great length (over five inches), lest it should cause future trouble. The point of interest connected with one of the cases reported was that after its removal it continued for almost ten minutes to squirm on the plate very much as a grub worm might do, and, finally, a formed fecal movement took place from it." An organ with this amount of expulsive power, if irritated, and especially if, owing to swelling, stenosis, or twist, its outlet is more or less completely closed, may well give rise to intense colic.

Can we make a differential diagnosis between appendicular colic and appendicitis? *Prima facie*, one would be inclined to say yes. One would *imagine* that in the colic there would be no fever during the attacks, and that the pain would be relieved by pressure; that between the attacks pain and tenderness would be entirely absent. But a careful study of the few cases reported shows such an idea to be erroneous. We may have high fever during an attack of colic; we do have very marked tenderness, especially over McBurney's point; we may have extreme collapse and all the signs and symptoms of acute perforative appendicitis. In the *intervals* between the attacks we may and do have that classic sign of appendicitis, tenderness at the McBurney point, and palpation may give us a sensation of increased resistance or fullness. Altogether, it seems to me that with our present knowledge, or want of knowledge, while a diagnosis of probability may be made, a positive differential diagnosis is rarely possible. Of course, these remarks do not apply to some cases of chronic appendicitis which have reached the stage of suppuration, the suppuration being localized by the formation of adhesions all around. Here we may have positive signs of inflammation, even fluctuation and inflammatory cedema of the skin. Where pus is believed to be present, it may be demonstrated by the use of the long needle and the Pravaz syringe. This method of exploration is, however, unsatisfactory, because, when by its means pus is not found, we are no more sure of its non-existence than if no exploration had been made. A much more satisfactory method of exploration is by incision, which gives positive results, and is *at least* no more dangerous than the former procedure. Exploratory incisions may be made under cocaine anæsthesia with satisfaction where a general anæsthetic is contraindicated. Such explorations, whether made by the needle or the knife, must be carried out with full aseptic precautions.

Where there is some probability of the trouble from which a patient is suffering being appendicular colic, we may follow the treatment outlined by Gersuny and Beuer, who claim to have cut short attacks of this trouble by massage applied to the right iliac region. The cases spoken of by Gersuny and Beuer have never come to anatomical demonstration. My strong personal belief is that the treatment for appendicitis and

appendicular colic ought to be the same, viz., removal of the offending organ. The operation, when performed by a surgeon who understands and *practises* clean surgery, is accompanied with but trifling danger, while appendicitis is a constant menace to life, and appendicular colic is apt to render life miserable. The treatment by massage already referred to may do good in cases of pure colic ; but should the diagnosis be at fault, and the disease be appendicitis (an error in diagnosis likely to occur in the most experienced hands), then the massage is calculated to do great and irretrievable harm.

LISTER'S PRESENT ANTISEPTIC PRACTICE.

Among the benefactors of the race of the nineteenth century, Sir Joseph Lister stands first and alone, practically because of what he has taught us regarding the antiseptic treatment of wounds.

In connection with the London post-graduate course, Sir Joseph Lister recently delivered several lectures upon this subject. From an editorial based upon these by J. E. Pilcher (*Annals of Surgery*), we take the following :

When the lecturer first entered upon this subject—knowing, as he did, that wounds, with rare exceptions, underwent putrid suppuration—he naturally considered them very favorable soil for the development of septic organisms. The experiments of Pasteur made it evident that the air of every inhabited place teemed with microbic life. Not understanding how to discriminate among them, it was supposed that any one of them would produce serious mischief in a wound. This is now known to be incorrect. In the first place, it is known that normal blood serum is by no means a favorable soil for the growth of bacteria, provided that they are in an attenuated condition. Secondly, and of even greater importance, is the fact that the living animal body has the power of defending itself against microbes introduced into it, chiefly by the process of phagocytosis. By the light of these facts, it is recognized that microbes in the form in which they are present in the air are not likely to develop in wounds, whence the once dreaded atmospheric dust may be disregarded in our operations. This renders unnecessary either irrigation or spraying, which is a form of irrigation.

The points requiring attention are the exclusion from wounds, during operation, of the grosser forms of septic mischief, such as exist in impure sponges, in dirty instruments, or in any unclean material upon the surgeon's hands, or the patient's skin. The *entourage* of the operation is managed by covering the region around it with towels soaked in a trustworthy

antiseptic solution to avoid contamination of the wound from hands which have been in contact with septic objects.

For the purification of sponges there is nothing better, after all, than the agent first used—carbolic acid, which is greatly superior to corrosive sublimate. It is a happy circumstance that the organisms having the most resisting spores do not enter into surgical consideration. The surgical microbes are almost exclusively sporeless micrococci, although some are much more resisting than others, as, for instance, the staphylococcus pyogenes aureus; and in such solutions as would be employed in surgery carbolic acid destroys this organism much more rapidly than does the bichloride of mercury.

The tubercle bacillus—a spore-bearing microbe—was shown by the experiments of M. Yersin, at the Institut Pasteur, to be killed in thirty seconds by a 5 per cent. watery solution of carbolic acid, and in a minute by a 1 per cent. solution, while a $\frac{1}{10}$ per cent. corrosive sublimate solution required ten minutes to accomplish the result.

The lecturer found this a very satisfactory matter, since it gave experimental demonstration of a fact of which he had long been convinced by experience, that tubercle bacilli would not be found in sponges if they are kept a considerable time in 5 per cent. carbolic solution. He treats his sponges in the hospital by washing them with soap and water, and afterward with soda; then thoroughly washing again with water, and, finally, after drying, put to steep in a 5 per cent. solution till they are required for use.

He emphasized the inconvenience of sterilizing instruments by boiling, and the ease with which sterilization by immersion in a 5 per cent. carbolic solution may be accomplished. With regard to the length of time instruments require to be left in the solution, much depends on the care with which they have been washed before being put away. Toothed instruments, such as forceps, require especial attention; they should always be brushed with a nail brush before they are dried, so that there may be no crusts of dried blood upon them, which the carbolic lotion might require a considerable time to penetrate. If this has been done, they can be sterilized in a very short time. In the lecturer's private practice instruments are put into 5 per cent. carbolic solution just before the patient is brought into the room; the time during which he is anæsthetized and other preparations are made is quite adequate for sterilization.

In purifying the skin of the patient, contact with the antiseptic lotion for hours, as is sometimes done, is unnecessary; a few minutes' action of the 5 per cent. carbolic lotion being really sufficient.

Carbolic acid is not only a more efficient surgical germicide than corrosive sublimate, but it is much more efficient in cleansing the skin. It

has a powerful affinity for the epidermis, penetrating deeply into its substances, and it mingles with fatty materials in any proportion. Corrosive sublimate, on the other hand, cannot penetrate in the slightest degree into anything greasy; whence those who used it require elaborate precautions in the way of cleansing the skin.

The sponges, during operation, are washed in 2½ per cent. carbolic lotion, and before closing the wound is washed with the same solution.

Sir Joseph then proceeded to a discussion of iodoform as an antiseptic, remarking that while it seems to have little effect upon the development of bacteria, it certainly exercises an important antiseptic influence in wounds, which probably is due to its chemical action upon the products of the bacteria, rendering mere toxines harmless. In circumstances where the exclusion of septic agencies is impossible, as in operations upon the anus or in the presence of putrid sinuses, iodoform is of very high value. In compound fractures, while the wound should be purified with carbolic lotion, iodoform should be used in the dressing. A porous material impregnated with it, when soaked through with blood or serum, will allow the microbes of external defilement to propagate in its substance. It is essentially in the interior of the wound that the virtues of iodoform are displayed.

An external antiseptic dressing, the lecturer remarks, should have four essential qualities to be ideally perfect: (1) It should contain some thoroughly trustworthy antiseptic ingredient. (2) It should have that substance so stored up that it cannot be dissipated to a dangerous degree before the dressing is changed. (3) It should be entirely unirritating. (4) It should be capable of freely absorbing any blood and serum that may ooze from the wound.

The carbolic gauze formerly used contained a sufficiently efficient antiseptic, but, as it was volatile, it was perpetually flying off in spite of all attempts to fix it, and it was uncertain in how many days it might have so far disappeared from the dressing as to leave it untrustworthy. Carbolic acid also had the disadvantage as an element of an external dressing that, acting with peculiar energy on the epidermis, it interfered seriously with cicatrization, and the interposition of a "protective" was necessary to shield the wound from its action. Moreover, the resin contained in the gauze for the purpose of fixing the carbolic acid detracted from its efficiency as an absorbent of blood and serum.

Corrosive sublimate had the advantage of not being volatile, but it was readily washed out of the gauze or wool charged with it, and under some circumstances it proved very irritating; the discharge, passing from one part of the dressing to another, took up more and more of the bichloride

in its passage, and sometimes became so strong a solution of the salt as to cause vesication.

The double salt is very little soluble in blood serum, requiring between two or three thousand parts to dissolve it, so a small quantity will long outlast a free flow of discharge through it. With regard to its antiseptic power, even the small quantity dissolved by serum proves ample to prevent bacteric development. When mixed with serum and corpuscles, it prevents putrefaction in smaller quantity than any other antiseptic known. The severity of the test of an antiseptic is in proportion to the amount of albuminoid substances in the solution tested; and when the red corpuscles are mingled with the serum, as is the case in the first twenty-four hours after the infection of a wound, a much larger amount of the antiseptic is needed than with the serum only. Four times more corrosive sublimate is required to prevent putrefaction in serum and corpuscles than in serum only. The double cyanide answers the purpose in half the quantity that is necessary with corrosive sublimate.

After trying various dyes for a considerable period, the lecturer has settled upon an aniline dye, the hydrochlorate of mauveine, known in commerce by the name of purified rosolane. This dyes the white double cyanide a mauve color,

In changing the gauze, the dyed cyanide is diffused with the pestle and mortar in a 5 per cent. solution of carbolic acid, in the proportion of about thirty grains to the pint; the gauze, which must be of thoroughly absorbent quality, is drawn in a thickness of about eight layers through the liquid.

The dried cyanide power may be mixed up with the carbolic lotion into a sort of mud or cream, which may be applied with a camel's hair brush to parts where there is very little space between the wound and the source of septic contamination. The lecturer by this means has repeatedly been able to avoid suppuration in the vicinity of the anus. The mass of antiseptic salt upon the skin prevents the microbes from working their way into the wound under the narrow strips of dressing alone available. There are also situations, such as the pubes, where the cyanide cream applied to the hairs converts them with great advantage into a part of the antiseptic dressing.

In changing the dressings, he makes it an invariable rule to cover the wound with something reliably antiseptic before washing surrounding impure parts, so as to avoid the chance of defiling the wound with them. While it is doubtless true that the dressing that is applied immediately after operation might in most cases be left untouched for several days, nevertheless, when the discharge is free, Sir Joseph prefers to remove the first dressing when the first twenty-four hours have passed. Thus the

serum and corpuscles are gotten away, which, constituting the largest amount of discharge in the case, also test the antiseptic dressings the most severely.

While any opinion which Sir Joseph Lister might express with regard to antiseptic surgery would be heard with profound attention by the surgical world, the address, of which we have quoted the larger portion, giving the details of his methods at the present advanced stage of his work, is a most exceptionally interesting contribution to surgical literature.

BILIARY CALCULUS CAUSING INTESTINAL OBSTRUCTION; LAPAROTOMY;
INTESTINE SUTURED AND REPLACED; RECOVERY.

Dr. Tenillon reports the case of a woman, 46 years of age, who had suffered for a long time with biliary colic. Finally, symptoms of intestinal obstruction came on. Five days after the commencement of these symptoms the abdomen was opened, and a lump, quite hard, was found above the ilio-cæcal valve. A longitudinal incision along the intestine, large enough to extract the calculus through, was made. The calculus was five centimeters long and nine centimeters in circumference. The intestinal wound was closed by three rows of fine silk sutures.

All symptoms ceased immediately. The patient recovered completely, experiencing at present no pain or inconvenience.

A similar case was published in France by Pouzet, and another by Dr. Thiriar, in Belgium, in 1891. There have been performed twenty-three operations, with seven cures, for this condition.

Dr. Tenillon says "that death has most often resulted because of peritonitis after the operation; also because of too long delay in operating." Operate early.—*Bul. Gén. de Thérapeu.* J.A.A.

THE CAUSE OF DEATH AFTER BURNS.

Salvioli (*Centralblatt für Chirurgie*, January 28th, 1893) says that the cause of death after burns is due largely to the involvement of the blood vessels in the different organs. According to Bizzozero, the great increase of blood plates in the normal circulation is essentially the result of burns. When the mesenterium of mammals is examined microscopically, and then heated to a temperature of from 50 to 55 C., it is noticed that the flow of blood becomes quickened, and that the blood plates collect along the walls of the vessels and cause the formation of white thrombi. These, in turn, are torn loose by the blood stream, and as a result we have an enormous number of emboli. In certain cases, and especially when considerable heat has been applied, the blood does not circulate. This condition of stasis is partly due to thrombotic and embolic conditions, which stop up the arteries; partly to contraction of the arteries; and, lastly, to a

change in the red blood corpuscles, which become sticky and hang together, and thus hinder the blood flow. After death, numerous emboli are found in the lung parenchyma and many blood-plate thrombi in the vessels. To prove that these results are due to the increase in number of the blood plates, we have only to defibrinate the blood, and the application of heat will produce but little effect. In performing this experiment, it is necessary to remove a large quantity of blood defibrinate by whipping, filter, and again inject into the animal. This should be repeated ten times in two hours. Through this process the blood loses its power of coagulation, and is poor in blood plates. Before this procedure, one plate to thirty-five corpuscles was counted; after it, one in two hundred and seventy.—*University Medical Magazine*.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor., L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Assistant Pathologist, Toronto General Hospital.

MASSAGE OF THE PROSTATE.

Thure Brandt, to whom we owe the introduction of gynecological massage, was the first to propose it in the treatment of prostatic affections. The diseases of the prostate, particularly hypertrophy of this organ, are trophic affections. Age and posterior urethritis are the causes of trophic changes in the prostate. Massage, by stimulating the circulation in the prostatic vessels, improves nutrition, and aids in the absorption of pathological products. The operative technique is simple. The bladder being emptied, the lubricated index finger is introduced into the rectum. With the pulp of the finger, gentle repeated pressures and rubbings of the tumefied gland are practised. The rubbing, according to Brandt, should be from within outwards; that is, toward the pubic arch. Volianski, on the other hand, directs the movements to be made in the other direction, in the course of the lymphatics. The sitting should be of from one to three minutes' duration. The author reports five cases in which he has attained very satisfactory results by this massage.—*Bul. Gén. de Thérapeu.*

J.A.A.

URETHRAL STRICTURES IN THE FEMALE.

Genouville (*Annales des Maladies des Organes Genito-Urinair*, 1892) points out, as a proof of the extreme rarity of stricture of the female urethra, that not more than sixty cases have been reported. The most frequent cause is gonorrhœa, which existed in a little more than one-third

of the cases. Traumatism is also a relatively frequent cause, the female urethra being injured during the course of a prolonged and difficult labor. Some authorities have described a form of senile stricture which is attributed to a thickening of the urethro-vaginal cellular tissue. In the female, as in the male, the results of injury to the urethra develop more speedily than those following gonorrhœa. The functional signs of stricture of the urethra vary from simple discomfort in micturition to complete retention. The symptoms increase in severity more rapidly in the female than in the male. This clinical fact is due, the author holds, to the fact that in the former the bladder is less powerful than in the latter sex. In cases of obstruction in the urethral canal, the bladder of the female becomes more readily fatigued, and its inferiority is shown by the early development of functional failure. Urethral stricture in the female is capable of producing cystitis and ascending pyelonephritis in every respect analogous to those produced in the male. The complications may result even from a slight stricture of the female urethra. The treatment most frequently practised in cases of stricture of the female urethra has been that of gradual dilatation. Urethrotomy and electrolysis have also been tried, but not to such an extent as would justify any definite conclusion.

Total urethrotomy, or division of the whole thickness of the urethro-vaginal wall at the seat of stricture, is advocated as furnishing a better security against recurrence of the stricture, since it removes, from a functional point of view, the strictured portion of the urethra, and consequently excludes any possibility of relapse.—*University Medical Magazine.*

METHYLENE BLUE IN ACUTE NEPHRITIS.

Acting upon the assumption that acute nephritis is due to infection with a special micro-organism—the streptococcus described by Mannaberg—Netschajeff, of Moscow (*Deutsche med. Woch.*, May 18th, 1893), has made use of methylene blue, which is excreted in the urine, and has the power, as he ascertained, of preventing the growth of various bacteria in culture media with which it is mixed. The dose given was $1\frac{1}{2}$ grains in capsules, thrice on alternate days. The number of cases treated was fifteen. The urine was stained blue usually in an hour, and on the next day the quantity of the urine was increased, while the amount of albumen and casts gradually diminished. No unpleasant effects were noticed. The rapidity of the recovery in three cases, which are related at length, was remarkable. In one, a man aged 30, suffering from acute nephritis for the first time, the treatment was begun on the tenth day after he noticed general œdema. Four days later the quantity of the urine was nearly quadrupled; casts, which had previously been plentiful, could no longer be found; the quantity of albumen had diminished; and the

œdema was limited to the lower limbs below the knee. On the seventh day all the œdema had disappeared, the albumen had entirely disappeared, and the quantity of urine was about thrice what it had been at the commencement of the treatment. The patient left the hospital nine days after receiving the first dose of methylene blue. In another case a man, aged 36, an habitual drinker, the treatment was commenced on the sixteenth day of his illness. The quantity of the albumen was reduced to half, the quantity of urine more than tripled on the fourth day of treatment; all œdema, which had been general, had disappeared after four days more; and two days later the urine had ceased to contain albumen. In the third case treatment was commenced on the tenth day of the illness, when there was general anasarca and dilatation of the heart, the patient's general condition being bad. All the œdema and albuminuria had disappeared completely on the sixteenth day of treatment, and the quantity of urine was nearly quadrupled. Netschajeff considers that it would be improper to ascribe the improvement to a diuretic action of methylene blue, since in other conditions, such as failure of cardiac compensation and cirrhosis of the liver, it has no diuretic action. He believes that the effect is due to a restoration of the renal function brought about by the specific action of the methylene blue, which renders the kidney tissues an unsuitable nidus for the development of the streptococci.—*Epitome British Medical Journal*.

HYPODERMATIC METHOD IN THE TREATMENT OF SYPHILIS.

Dr. J. William White, of Philadelphia, has gone very thoroughly into the hypodermatic treatment of syphilis (*University Medical Magazine*, May and June, 1893). He has reviewed the treatment from its inception, has obtained the opinion of all the leading syphilographers in America, and from the consensus of opinion expressed he has drawn the following conclusions:

In the light of the evidence presented above, it seems to me safe to assert that: (1) The hypodermatic treatment of syphilis has not as yet shown results which warrant its adoption as a routine method to the exclusion of or in preference to other methods; but, on the contrary, has some apparently insuperable disadvantages, and even dangers, which render it improbable that it ever will be so adopted.

(2) The circumstances under which hypodermatic medication should be employed may be summarized as follows: (a) Those cases in which other methods of treatment have been tried and failed; (b) those cases in which, owing to idiosyncrasy or intercurrent disease, the skin and the digestive tract cannot be used for the introduction of mercury; (c) those cases in which, owing to grave and advancing lesions, rapid mercurializa-

tion is absolutely necessary ; (*d*) those cases in which obstinate localized lesions can be most directly reached by this plan ; (*e*) possibly those cases referred to by Jullien, in which early differentiation between syphilis and malignant disease, or tubercular ulceration, is extremely important, should be included in this list ; I certainly feel inclined to employ the method in all doubtful cases which admit of it, particularly in those conditions of the tongue which often leave the surgeon for a considerable time in doubt as to their exact nature ; anything which promises to shorten this period of doubt, by rendering the therapeutic test more rapid and more certain, would be of great advantage ; I should, however, in such instances, feel obliged to use potassium iodide by the mouth at the same time ; (*f*) a theoretical possibility of the employment of mercury hypodermatically has suggested itself to me, but I have not as yet actually employed it. It may be that its use by this method will aid in shortening the period of doubt which often intervenes between the appearance of the primary sore and the development of general adenopathy, or of the exanthemata. If in the presence of a sore of uncertain character the employment of mercury hypodermatically resulted in rapid cicatrization, no local treatment being employed other than cleanliness, it might occasionally throw light upon the case without being open to all the objections which attend the systematic and slower administration of mercury by the mouth. It is possible that the idea is worth a trial in exceptional cases, but I do not think it should be adopted as a routine practice.

(3) As to the choice between the two great classes of mercurials, the soluble salts are to be preferred to the insoluble in the large majority of cases as more exact in the matter of dosage, and much less dangerous and less likely to be followed by local disturbances. They are always to be used when there is need for rapid mercurialization.

The insoluble salts should probably be reserved for those cases in which frequent visits to the surgeon are impossible, and in which no contradictions exist. In cases of defective kidneys, diabetes, profound anæmia, marked atheroma, great debility, etc., such methods are dangerous, and the case, even if urgent, will probably do better under some other form of treatment.

(4) Finally, as to the special preparation to be employed : Among the soluble salts, the bichloride is probably to be preferred. The results from its use are not strikingly different from those obtained from the other compounds of this class but its stability and great solubility and its germicidal qualities seem to warrant its selection. The disadvantage is the pain which it causes ; but the evidence in this direction shows that in the hands of impartial investigators not responsible for the introduction of the particular substance employed, each of the salts on the list produces a con-

siderable amount of pain and a not inconsiderable number of accidents or complications. Probably the bichloride is freer from objectionable features in respect especially to the production of suppuration than any of the salts of mercury.

Among the insoluble salts, calomel and the yellow oxide are to be preferred. It would appear that the latter is a little less active, but at the same time much less irritating. Gray oil is the most available form of administering metallic mercury.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto;

AND

E. HERBERT ADAMS, M.D., D.D.S.

SMALLPOX IN ENGLAND.

There were 537 cases of smallpox in the Metropolitan Asylum Board's hospitals on the 20th of May. The latest reports say that smallpox is decreasing in England.

HOSPITAL FOR CONSUMPTIVES.

A hospital for consumptives has been established at Agincourt, in the Department of the Oise, by the municipal authorities of Paris. The measure was rendered urgently necessary in consequence of the overcrowding of the general hospital by phthisical patients.—*Medical Record*.

A NATIONAL BUREAU OF HEALTH.

The question of the establishment of a National Bureau of Health for the United States has been rather prominent of late, and it is to be hoped that the idea will be consummated in the near future. Many great questions of quarantine and public hygiene could be more successfully dealt with by such a central health organization.

SYSTEMATIC SANITARY INSPECTION.

The summer corps of the Board of Health of New York city began work on July 5th. The corps is composed of fifty physicians, each one having charge of a district, in which he is expected to visit and inspect every tenement house, reporting on its sanitary condition, and prescribing for the sick poor who may be unable to pay for medical attendance.—*Medical Record*.

THE DIAGNOSIS OF DIPHTHERIA.

The Board of Health of New York city will hereafter undertake to make bacteriological cultures of all suspected cases of diphtheria occurring

in the city. As many cases reported as diphtheria are not true diphtheria, the advantages of such a procedure will be obvious to all. It will, however, entail an immense amount of extra work on the department. Should the experiment prove successful in New York, it would be well if the Toronto Board of Health would undertake similar duties.

TUBERCULOUS MEAT.

The following resolution has been passed by the Incorporated Society of Medical Officers of Health of England :

While awaiting the report of the Royal Commission on Tuberculosis, it is the opinion of this society that the presence of tubercle at any stage in more than one part or organ of a carcass, or the presence of tubercle in any other than the primary stage (crude tubercle) in any single part or organ of a carcass, is sufficient and proper ground for the condemnation of such carcass as unfit for human food ; and that all butchers' meat or other flesh coming within the above description should be condemned accordingly.—*Public Health*.

RELATION OF FLIES TO THE SPREAD OF DISEASE.

Sawtschenks (*Hygienisches Rundschau*, April, 1893), after mentioning that Grassi, Cottani, Sizzoni, and Simmonds showed that flies might carry on their surface bacteria, describes a series of experiments to ascertain whether cholera bacilli could live in the alimentary tract of the fly, and be found alone in the excreta. He found that flies which had fed two hours previously upon cholera bacilli excreted numerous saprophytic and some cholera bacilli. After 6 to 24 hours the cholera bacilli increased, whilst the saprophytes diminished. It was possible to prove the presence of the cholera bacilli in the intestine, nor did they lose their virulence after twenty-four hours' sojourn in the alimentary tract. He further thinks that they multiply in the intestine. Flies fed upon the excreta or the intestinal contents of cholera cases showed the presence of the characteristic bacilli.—*Public Health*.

A STANDING COMMITTEE ON CHOLERA.

The Standing Committee on Cholera of the College of Physicians of Philadelphia issued a circular on June the 20th asking the organized co-operation of the physicians of Philadelphia in their efforts to prevent the appearance of cholera during the coming summer. Physicians in each ward from the number of those volunteering for the public service will be asked to observe especially—as they may readily do in their daily rounds—the conditions of the streets, alleys, sewers, and gutters, and to report to the committee on the performance and thoroughness of the work of street-cleaning contractors, etc. It is also desired that they should observe

as far as possible, the sanitary condition of dwellings, especially noting nuisances which need to be immediately remedied. Reports should be immediate, explicit, and concise. Necessary blanks for the purpose will be supplied by the committee. If cholera appears ambulance corps, nurse corps, etc., will be organized by the committee. The committee will work in conjunction with the Board of Health and other civic authorities.

THE CHOLERA.

Reports from Mecca show that the cholera is raging to an almost unparalleled extent, even for that hotbed of epidemic disease, 830 deaths having occurred there in four days ending June 20th; 445 on Sunday, June 25th; and only one less than a thousand on Monday, June 25th. This is the largest number reported during the present epidemic, but there is no reason why it should not be exceeded, except that the material for the disease to work upon must become exhausted in the course of time, notwithstanding the fact that the pilgrimage to Mecca is very large this year. The latest advices from Russia indicate that the disease is diminishing in that empire. There can be little doubt that the cholera prevails to a considerable extent throughout France, though the authorities are pursuing the foolish, if not criminal, course of attempting to conceal the extent of its ravages. Cases are reported from the coast towns in both the northern and southern portions of the country, and the fact that the authorities in Montpellier and elsewhere are voting large sums for the building of temporary lazarettoes for the reception of cholera patients bears witness to the prevalence of the disease in those places. Cases are reported in Alais, Nantes, Toulon, Hyères, and Cette, and the disease exists also in Malta and Cephalonia in the Mediterranean, and in Catalonia, Spain. The reports from Hamburg are more cheering, no new cases having occurred there during the week ending June 23rd.—*Medical Record*.

Editorials.

THE ONTARIO MEDICAL ASSOCIATION.

IT is satisfactory to know that the affairs of this vigorous association are in a prosperous condition; but it is somewhat unfortunate, at the same time, that the recent thirteenth annual meeting was below the average of the last few years in some respects. The number of those present fell far below ordinary high-water mark, being 141, while last year it was 200. It has been stated by some that the character of the papers read, and the

accompanying discussions, were up to the average. The old proverb about comparisons is worthy of consideration in this relation, and we are not disposed to be aggressive in this particular line.

We think it time that the association should advance, not simply maintain its average. It is strong in numbers, in enthusiasm, and in the ability of its members. It contains the best elements of the profession in the greatest province of the Dominion; it has always been well officered and well managed in every respect; its prospects were never brighter than at the present time. However, the future success will depend on the faithful work especially of the younger members, who, we hope, will rise equal to the occasion, and imitate a few who read excellent and carefully-prepared papers at the last meeting.

The social features of the meeting were particularly pleasant. The luncheon given by the Toronto members was the most successful and enjoyable in the history of the society. Dr. Burns made an admirable chairman. He presided with grace and dignity, spoke pleasantly, always knew when to stop, and put everybody in good humor. Those bright and witty Irishmen, Drs. Hillary and Sullivan, fairly excelled themselves—if such be possible—and carried up the crowd from the regions of anatomy and pathology to the highest realms of fun and good fellowship. Dr. Sheard, president of the Canadian Medical Association, spoke well, making an earnest appeal for the support of all present towards the coming meeting in London in September next.

The association is deeply indebted to the president and directors of the Victoria Hospital for Sick Children for their generous entertainment in their magnificent building on the first day of the meeting. A number of good men and women in Toronto have been doing, in a quiet but effective way, noble work, which has culminated in the erection of one of the finest structures for the treatment of sick children that the world has ever seen. "May God bless and prosper them" was probably the silent prayer of all who had the privilege of being present.

We will not attempt to express the delight of those who were able to accept the invitation to visit the Lakeside Home on the following day. It was a revelation to many, if not all, to learn how much was being done for the treatment of the poor sick little ones in the summer months. John Ross Robertson, in the erection of this noble charity, together with his intelligent and unwearying care of these young sufferers, will leave one of the grandest and most enduring monuments that this province has ever seen or ever will see.

It is only fair to refer to the good work done in the interests of the meeting by the president, Dr. Hillary, of Aurora; the secretary, Dr. J. Gibb Wishart; and the other officers of the association. We desire to con-

gratulate the new president, Dr. McFarlane, on his election, which was very popular, and, at the same time, to express the hope that the next meeting may be the most successful one in the history of the association.

ONTARIO MEDICAL COUNCIL.

THE recent meeting of the Ontario Medical Council was, in many respects, a satisfactory one. At the first session, Dr. Fowler, the retiring president, delivered an address which was dignified and temperate in tone.

The first business of importance was the election of the officers for the coming year. Dr. C. T. Campbell, of London, was elected president ; and it was generally admitted that he performed his duties at the meeting in a most able and impartial manner. The election of Dr. Philip to the vice-presidency gave general satisfaction. The other officers elected were : Registrar, Dr. R. A. Pyne ; treasurer, Dr. W. T. Aikins ; solicitor, Mr. B. B. Osler ; official stenographer, Mr. Alexander Downey.

After a number of notices of motion had been introduced, Dr. Henry made enquiries as to the "gerrymandering" of the constituencies under the new Medical Act. Dr. Williams, in reply, said the Legislative Committee (appointed by the council) knew very little about it, as the bill had been introduced without the sanction of this committee. The learned ex-president evidently considered that the council had received a broad-sized snub from the Ontario Legislature ; and a careful consideration of all the circumstances connected with the amended act, including the arrangement of the constituencies, will make most people think that he is not far wrong.

One of the earliest reports was that of the Discipline Committee, dealing with the cases of Dr. McCully and Dr. Anderson, and recommending that sentence be suspended during the good conduct of the offenders. Both had acknowledged unprofessional conduct, and made ample apology. We have no time now to discuss the work of the Discipline Committee in detail ; but we have much pleasure in testifying to the general approval on the part of the profession of the valuable work done by this able and hard-working committee during the past ten years. A few have expressed some dissatisfaction ; but the majority, including many "Defence" men, approve.

Dr. Philip brought up the subject of certificates for professional nurses from the various hospitals in Ontario. He thought it might be advisable for the council to conduct the examinations and grant the certificates to the graduating classes in all parts of the province. The matter was

referred to a special committee. After a careful consideration of the proposal, and a consultation with Dr. O'Reilly, of the Toronto General Hospital, it was decided best to defer the matter for a year. The Education Committee made a very important change in deleting therapeutics from the subjects required at the primary examination, and placing it on the list for the final.

We regret that the council decided to continue a subsidy to the *Ontario Medical Journal*. The action of the council last year certainly caused us considerable surprise—to put it mildly. We heard all the arguments advanced in favor of the procedure, and watched the results. The following, in brief, are some of the results: a heavy blow has been struck against original research and independent medical journalism; a gross injustice has been done to *The Canada Lancet* and *THE CANADIAN PRACTITIONER*, the two old and recognized medical periodicals of Ontario, which have invariably given the council a hearty, though independent, support. The council has gained no strength from the paid support of its subsidized journal.

The Lancet has already spoken on the subject briefly, but in a dignified manner. We have been asked, What will *THE PRACTITIONER* do under the circumstances? We have no hesitation in giving our answer. We will continue to support the council. We will in the future, as we have in the past, uphold the college as the great medical parliament of the province, but we respectfully decline to sell ourselves to that body. We united with *The Lancet* in offering to publish the proceedings of the council free of charge, and thus save some hundreds of dollars of the subsidy. Many members acknowledged that, in not accepting the offer of *The Lancet* and *THE PRACTITIONER*, the council was doing the profession an injustice, without securing any compensating advantage; but they thought that it was only fair to give the company which published the new journal one more year's subsidy, in the hope that it might thereafter be able to stand alone. Although we do not consider that there is much in the argument, we will give the majority of the council credit for purity of motives, where indifference did not prevail. A small minority of the council, in openly canvassing for a scheme which it was hoped would help a brother member in a private speculation, have acted in a way which is certainly not above criticism, although it may be considered by a very few as quite honest and honorable. Even the Toronto city council, low as it has fallen, has always refused to give a contract to a company in which one or more of its members are interested.

We regret very much the tone of certain articles in the *Toronto Mail*. Wholesale abuse of that newspaper, which is one of the best on the continent, will, however, do no good. The discussion on the sub-

ject in the council was a varied one in more respects than one, and, on the whole, was altogether too long. Some discussed the matter in a calm and dignified way; others spoke like angry schoolboys who had been hard hit and wished to talk loud. The unwise conduct of a few injudicious orators gave the *Mail* a good opportunity, in its reply, to laugh the council out of court.

Meetings of Medical Societies.

REPORT OF THE THIRTEENTH ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

Held in Hall, Educational Department, Wednesday and Thursday, June 21st and 22nd.

Reported by Dr. J. N. E. Brown, Official Stenographer to the Association.

The thirteenth annual meeting of the Ontario Medical Association met in the hall of the Educational Department of the Normal School on June 21st, at 10 a.m.; Dr. R. W. Hillary, of Aurora, in the chair.

Vice-Presidents Dr. Brock, of Guelph; Dr. McKay, M.P.P., of Ingersoll; Dr. Sheard, president, and Dr. Birkett, of Montreal, secretary of the Dominion Association, were invited to seats on the platform. Dr. Wishart then read the minutes of the last meeting, which were carried.

After the reading of several letters of regret and the reception of a number of new members, the first paper was proceeded with.

As Dr. Powell was absent, the president called on Dr. A. A. MacDonald, who read an excellent paper on

CHOLELITHOTOMY WITH CHOLEDUODENOSTOMY FOR THE RELIEF OF CHOLEMIA DUE TO OBSTRUCTION OF THE COMMON BILE DUCT.

Below is an excerpt from the paper:

Gallstones may exist for some time in the gall bladder and produce no definite symptoms, but not so when they become impacted in the common duct. The treatment for this latter condition has heretofore been unsatisfactory, but now such an advance has been made in the way of surgical treatment that it appears that it will be placed on a scientific and satisfactory basis. Chronic jaundice depends upon obstruction to the flow of the bile. Where the jaundice is due to a new growth, the following are some of the symptoms: emaciation, dyspepsia, flatulence, absence of bile in the fæces, its presence in the urine, etc. Death ensues usually within a year. When due to impacted gallstones or stricture, the symptoms are not so constant, and the case may last for years. The pres-

ence of gallstones in the gall bladder cannot be accounted for, although they are frequently found at autopsies in subjects over sixty years old. The assigned causes are: sedentary habits, too much starchy food, constipation, tight-lacing, etc. In order to treat these cases successfully, the bile must re-enter the intestine. The doctor then outlined the history of a case he had upon whom this was attempted. After an incision through the abdominal wall, the gall bladder and the duodenum were opened and through each incision was put one of Murphy's buttons. These were then approximated, bringing the two serous surfaces together. The patient's jaundice disappeared, but death ensued. A *post mortem* showed non-union owing to lack of vitality of the tissues.

Dr. N. A. Powell then gave the history of a case in which a similar operation had been performed, but the method employed was that of Gaston—the use of the elastic ligature. The operation was ultimately a failure, for the patient died. He thought the buttons an improvement on the elastic ligature.

Dr. McDonald, in replying, pointed out the fault in Gaston's method to be the closing of the fistula made by the ligature by the process of healing immediately after the ligature had cut through. He then detailed some of the objections raised against the buttons, but showed that they were not at all serious objections. Concluding, he hoped before many months there would be many successful cases reported in this very interesting branch of intestinal surgery.

The president then gave his address. He said he felt much honored at being elected to the position he occupied, more especially as he was absent from the last year's meeting; and also because the position had formerly been filled by such a distinguished array of men. He referred feelingly to the loss the association had sustained by the deaths of Dr. Worthington, of Clinton, and Dr. Henderson, of Kingston, both past presidents of the association. He was glad to know that the matter of reciprocal registration of medical men between Canada and the old land rested with the home authorities, but thought not much could be expected from them when we ourselves had not decided on reciprocal provincial registration. He (the speaker) advocated a Dominion council. He endorsed the raise in the educational standard for medical men in the province. He detailed some of the evils of club practice and denounced it. In regard to the Medical Council, he saw much to approve and some things to condemn; but, as it was constantly improving in many ways, he thought it should be liberally dealt with. He strongly advocated the formation of a club, which might meet in the council building. This would tend to foster a spirit of cordiality and unity among the members of the profession that no other means could. There might be, he thought,

some wards made into which patients brought from outside the city by their physicians upon whom they (the physicians) wished consultation might be placed for a time. The speaker favored the increase of territorial representatives, and in regard to contested elections he approved of the method of having the case tried before the county judge. In concluding his address, Dr. Hillary welcomed the visitors present from the other side of the line, and hoped they would be treated by the members of the association with the same cordiality and good feeling which Canadians received over there.

Dr. McKay moved a vote of thanks to the president for his address, which was carried with applause.

Dr. Hillary replied that he was pleased that his remarks were so well received, and hoped his suggestions would shortly take on some practical form.

The chairman at this juncture introduced the Minister of Education to the association, who said that he did not come to discuss medical questions, but to inquire whether the members of the association were comfortable in the hall. It was an honor to have their presence, and he welcomed them. They would, he said, be welcome at all times they wished to honor the institution with their presence.

Dr. W. B. DeGarmo, the delegate from the New York Medical Association, said his chief duty was to present the greetings and good will of his association; the next was to read his paper,

THE TREATMENT OF HERNIA BY THE GENERAL PRACTITIONER.*

Dr. DeGarmo began by saying that it was impossible to fully discuss so extensive a subject in the short time allotted. Too much time had been spent on the surgical side of the question. He proposed to devote his time to the palliative treatment—means within the reach of every practitioner. The doctor then gave a short account of the history of trusses, pointing out the good qualities and the defects in them. These various trusses were shown. A good truss should hold the hernia completely within the abdominal cavity. No truss for inguinal hernia should have its pad attached by a descending arm. The centre of the pad should correspond to the centre of the spring. He also pointed out the value of the cross-bodied truss. The English truss, however, which had this good point, had too strong a spring. The doctor then showed a truss of his own invention for femoral hernia which filled the necessary requirements demanded in a truss for femoral hernia. After getting a perfectly fitting truss, the practitioner should watch his patient until cured, seeing him at least once a month to see that the hernia was securely held. In infants

* Will be published in a subsequent issue.

the springs used were usually too strong. They should be light, waterproof, and should be left on at nights. The doctor had treated infants as young as ten days old. There was no lack of appliances, the doctor concluded, but there was of medical men who understood the application of them.

Dr. Barrick said that they were all indebted to Dr. DeGarmo for his able address. He (Dr. Barrick) wished to refer to two or three points mentioned by Dr. DeGarmo. The first was with regard to the pad being in line with the spring; the second, the relation of the pad to the internal ring. He said that in old cases of hernia the internal ring was dragged down towards the external ring; therefore, he thought that the English truss, condemned by the reader of the paper, was constructed on the right principle, the pad being below the line of the spring.

Dr. Grasett said that he agreed in the main with what Dr. DeGarmo had said, but he did not like to hear the English truss condemned so strongly, as in many cases of failure it was not the fault of the truss, but was due to some accident by which it was broken or disabled.

Dr. Harvie then read the report of the Committee on Ethics, which was carried.

The president then called on Dr. Powell, of Ottawa, who addressed the association on

THE MANAGEMENT OF ABORTION.*

He said he had no new and startling developments to tell them of, but that he merely wished to bring this important subject under their consideration. Syphilis, either through the mother or the male parent, was one of the commonest causes of abortion, and that in these cases mercury had been found to be very beneficial. Endometritis, fibroids, malignant disease, an everted or patulous os, and malpositions were other causes. The last condition was readily treated by keeping the fundus in its proper position for about three months. Subinvolution was another cause of the aborting habit, and in these cases local applications and general medication were needed. In other cases no cause could be given. Rest was an essential part of the treatment, particularly in threatened abortion. He also recommended absence of sexual intercourse, the use of opium, bromide of potassium, and viburnum. In primiparæ, where abortion had taken place, hemorrhage was often arrested by the ovum itself filling up the cervical canal. In multiparæ the tampon was often necessary. He advised curetting where there was continued hemorrhage accompanied by retention of a portion of the membranes which the finger could not reach.

* See page 483.

Dr. Shaw, of Toronto, agreed with Dr. Powell, but thought that a run-down and irritable condition of the patient was another frequent cause. Respecting opium, he would only use it in those cases where there was both pain and hemorrhage. He would always make sure that the uterine contents were expelled.

Dr. Machell, not being present when the paper was read, asked to be excused from discussing the subject.

Dr. Temple said he did not agree with the paper in one or two points : First, hemorrhage, in his experience, was more severe in primiparæ than in multiparæ ; therefore, he would, in treating them, use the tampon. Second, in primiparæ, he believed that abortions were more frequently due to the patients not taking care of themselves, and were not so often due to syphilis. Third, he considered that the after-results, such as septicæmia, etc., were far more to be dreaded than the hemorrhage at the time of the abortion.

Dr. A. H. Wright said that he did not agree with Dr. Temple that accident was the chief cause of abortion, as working women, in his experience, were least likely to abort. To prevent abortion, his treatment was rest, opium, and pot. brom. as an adjuvant. It was, he said, very difficult to decide that any given case was one of inevitable abortion. When it was inevitable, he emptied the uterus of its contents as soon as possible. If the os was undilated, he used the tampon ; but, if dilated, he generally used his finger to get rid of the contents. He concluded by saying that cleanliness should be assiduously attended to, and septicæmia would thus be avoided.

Dr. Powell then closed the discussion. He said that he did not agree with Dr. Temple, as he had found that hemorrhage in primiparæ was not so severe as in multiparæ; that the ovum filled the canal, and therefore no tampon was needed. He had not said that syphilis was the great and only cause of abortion, but that it was one of the most fruitful sources of it. With reference to what Dr. Shaw had said, he himself agreed that it was not wise to use opium where it was contraindicated.

The sections then divided, the medical remaining in the large hall. Dr. Brock took the chair, and Dr. Milner acted as secretary.

The association was now addressed by Dr. Wilson, of Richmond Hill, on

THE TREATMENT OF DIPHTHERIA.

The doctor strongly advocated the use of prophylactic treatment in the way of removing all sources of irritation from the mouth, nares, and tonsils, and anything that would cause hyperemia of these parts. The general condition of the system should be kept in the best possible condition, and the hygienic surroundings perfect. Early treatment, the doctor said, was necessary in order to lessen the vitality of the germs, and their virulence

and power of reproduction. When the membrane was small in amount it was possible to keep it rubbed off, and the denuded surface sprayed with bichloride solution. The membrane could be dissolved by papoid, hydrogen peroxide, etc. In many cases where we could not kill the bacilli, we could lower their vitality so that their virulence needed not to be feared. In cases with pain the cold coil should be used. The constitutional treatment consisted in the use of rest, liquid diet, and the administration of tinct. ferri perchlor.

The next gentleman who was called upon to address the association was Dr. Milner, of Toronto, who read a paper on

DIPHTHERIA: ITS CAUSE AND TREATMENT.

The doctor started out by saying that it was hard to say in many cases how the disease was contracted, but he had found it due to direct contagion most often. He then spoke of means to prevent its spreading: isolation, disinfection, etc. In speaking of treatment, he said an external application of turpentine was useful, and that, among solvents, peroxide of hydrogen was the most reliable. If the membrane formed very rapidly, obstructing respiration, it should be removed. Tincture of iron, he affirmed, was our sheet anchor in treating the constitutional symptoms. Stimulants also should be given from the first. The diet should be chiefly iced milk. Speaking of tracheotomy and intubation, he said that intubation should be used in infants under three and a half years old, also in adults. Tracheotomy should be performed in those between three and a half and five years old. The doctor then outlined two or three interesting cases he had had, one of which had been followed by paralysis and death.

A paper was then read by Dr. Bryce on

THE PUBLIC SCHOOLS IN RELATION TO THE DISSEMINATION OF DIPHTHERIA.

He showed by statistics gathered that the number of school children attending school under the age of ten years formed about eleven and four-fifths per cent. of our population, and that 76.3 per cent. of the number of deaths from diphtheria occur before the age of ten; showing that school life is the particularly susceptible age. The doctor showed from epidemics at home and abroad that the schools are a fruitful source of dissemination of the disease. Density of population, ill-ventilation, lack of sunshine, decaying matter, etc., are all helpful in spreading it. The doctor showed that the cubic amount of air space in the rooms used, the cleanliness of the floors, the frequency with which the air is changed, entered largely into the prevention of its spread. The altered humidity of the air in schoolrooms in winter, he thought, was a potent factor in the

spread of the disease, as it materially affected the condition of the mucous membrane of the respiratory tract.

Dr. Wilson then asked how it was that sanitation had decreased all other diseases, but diphtheria had increased.

Dr. Burrows asked if overcrowding of itself was sufficient to cause the disease, and that in dwellings of the poor would not the filthiness present often account for it?

Dr. Spencer said he would like to know why the most unsanitary parts of the city were free from diphtheria, while the parts perfect in sanitation were constantly having cases.

Dr. Bryce answered by saying that if the germs could be kept out of the school from the first, there would be no danger. But in the most healthy parts of the city germs had got into the schoolrooms from some one affected, and were thus spread by the school; and in this way those parts of the city were infected.

SURGICAL SECTION.

The Surgical Section of the association met in the examiners' hall at 4.30 p.m.; Dr. McKay, of Ingersoll, presiding. Dr. J. N. E. Brown was appointed secretary.

Dr. E. A. Spilsbury then read his paper on

DEFLECTION OF THE NASAL SEPTUM AND ITS SURGICAL TREATMENT.

He gave an outline of the pathology of the condition, its symptoms, and surgical treatment. The etiology he considered was traumatic, the symptoms were those of catarrh, buccal respiration with its attendant evils, a change in the voice, etc. The treatment he recommended was removal of the obstruction by incision or by crushing. He gave a history of the different methods employed in operating on a projecting septum, and entered into the details of Delstanche's method, which consists in crushing the septum by using a pair of forceps, having the limb which enters the occluded nostril and which comes in contact with the obstruction, armed with a stellate knife. After being thus straightened, he inserts a splint whose two arms, entering the nostrils, and brought into contact with the nasal septum, hold it in position till healing takes place. The doctor then gave a history of several cases in which he had employed this method with marked success.

Dr. Primrose then followed, his subject being

THE ANATOMY OF THE CHILD.*

This paper was highly interesting because he had frozen sections wherewith to illustrate his paper, and also photographs of the same. He said this method of studying anatomy was particularly useful in learning

* Will be published in THE PRACTITIONER.

the anatomy of the viscera and the structure of the joints. He contrasted the anatomy of the child with that of the adult. Many interesting points were to be seen upon examining the various sections, such as the relations of the antrum, the straightness of the nasal septum, the fascia of the eyeball, the horizontal position of the Eustachian tube, the relative position of the temporary and the permanent teeth, the immaturity of the mastoid cells, the "sucking cushion" so-called, the mediastina, the high position of the apex of the heart, the highly-developed diaphragm, the relatively large kidney and suprarenal bodies, the small pelvis, the abdominal position of the bladder, the vertical position of the rectum, and many other interesting features.

WEDNESDAY EVENING.

After the reading and adoption of the minutes of the last session and the reception of new members, Dr. Arnott, of London, read a paper entitled

A REVIEW OF THE DIAGNOSIS AND TREATMENT OF ASIATIC CHOLERA.

He pointed out the difficulty of recognizing the disease before it got a foothold in the community by reason of its similarity to sporadic cholera. He recommended that every case of diarrhoea be treated with all the sanitary precautions with which cholera is. In such a case the appearance of marked nervous phenomena should make us suspicious. The doctor portrayed vividly the various symptoms of the various stages, and emphasized the necessity of becoming absolutely certain of the diagnosis by a bacteriological examination. He described various conditions of the body, and of the surroundings which favored the spread and strength of the disease. In regard to the treatment he went fully into a discussion of the merits of the different plans employed—the eliminative, the astringent, the sedative, and the antiseptic, dwelling on the futility of any and all of them in many cases. The disease ought to be studied from cases uninfluenced by drugs. He opposed the use of alcohol in its treatment. His leanings were towards the eliminative treatment, and the application of heat externally and hot douches per rectum.

Dr. Sloan said that he did not agree with Dr. Arnott when he said that opium and alcohol were narcotics, and not stimulants. He (Dr. Sloan) had treated many critical cases with alcohol and opium which conclusively proved to him that they were stimulants.

Dr. Temple then said that he had seen several outbreaks of cholera in India, and found that, in many cases, drugs were worthless. He thought alcohol was the remedy. Warmth should also be applied.

Dr. Spencer said that he had seen cholera when in the east, and he agreed with Dr. Temple in every particular.

Dr. Hunter then asked Dr. Temple if he would treat the disease among Europeans as he would the people of India.

Dr. Temple replied that he would.

Dr. Barrick said that he had seen an epidemic of cholera in London, England, and that it depended on the severity of the epidemic and not on the treatment as to the number of deaths. At the beginning of the epidemic, the patients got alcohol and died. But as the epidemic got milder, they lived in spite of the alcohol. He closed by saying that he agreed with Dr. Arnott as to the use of alcohol.

Dr. Arnott then closed the discussion by still holding his former position, that alcohol was not a stimulant. It was, he said, an anodyne and antiseptic. He quoted cases from his own experience to vindicate his position.

Dr. Philp, of Hamilton, now read a paper on

THE PREVENTION OF CHOLERA.

He started out by saying that Asia was the breeding place of this disease. The doctor proved, by citing several instances, that the progress of cholera could be checked by quarantine and thorough disinfection. Also that it was mainly propagated by the stools of the patient affected; therefore it was imperative that the water supply should in no way become contaminated with the stools of the cholera patients. All excreta, he said, should be sterilized by carbolic acid or sulphate of iron. All clothing should be thoroughly disinfected which has come in contact with the contagium, great cleanliness should be observed, and the houses fumigated.

The following synopsis of a paper on

CHOLERA

was presented to the association by Dr. Saunders. In speaking of the morbid anatomy, he stated that there were very few characteristic appearances to account for the violent nature of the disease. The speaker described the condition in which the alimentary tract, heart, liver, lungs, and kidneys were usually found. One of the most constant pathological conditions was that the blood was nearly always dark and thick. There were two views as to what caused this. The doctor decided that it was due to the chemical action of the morbid material excreted by the comma bacillus. It must be remembered that the bacillus was destroyed by a heat of 140° F. and by weak disinfectants. Cholera could be diagnosed by bringing a culture of the bacilli into contact with free acid in the presence of oxygen, when a bright red color would be produced.

Dr. Rice, of Woodstock, was now called on and read a paper on

THE SYMPTOMS AND TREATMENT OF CHOLERA.

He said that many cases of dysentery, diarrhoea, etc., under bad hygienic surroundings, would, if they occurred in infectious countries, be classed as cases of cholera. The doctor then proceeded to give the symptoms which were found in the four stages of the disease. Then he dwelt on the treatment, saying that there was no specific line of treatment, but five indications were to be met, viz.: (1) The premonitory diarrhoea; (2) the loss of liquid by the bowels; (3) the low temperature; (4) the toxæmia; (5) the collapse.

The first condition could be met with calomel, followed by an astringent, with proper food and surroundings. In the second stage a large dose of calomel should be given, followed by successive small doses of the same and opium, or chloral, or chlorodyne, the latter to be given for the pain, if present. The doctor advised the use of hot antiseptic douches with tannin for the serous diarrhoea. For the lowered temperature, he recommended the continuance of the douches, with hot baths. We have, he said, no specific for the toxæmia, but calomel, iron, and quinine have been recommended. In the stage of collapse hot baths were advised, with injections of whiskey, brandy, strychnia, ether, etc. But usually when this stage had arrived the patient was beyond help.

Dr. Harrison, on being called, now addressed the association on the subject of

BLOOD-LETTING.

He said that it had been practised from time immemorial—that Virgil had mentioned it in one of his pastorals. He did not think that there were many men who had graduated during the last fifteen years who knew how to perform venesection. Prof. John Hughes Bennet, he said, gave blood-letting its deathblow by his attack upon it. The doctor thought that its indiscriminate use also assisted. But the doctor felt sure that this was a very useful agent, which was now so universally discarded by the profession. He said that he had perfect confidence in it as an efficient remedy in pneumonia, in which he had often tried it with success. It was useful, too, in emphysema. It was also useful in the various forms of heart disease, particularly where the right ventricle overloaded. He also spoke highly of its use in his own practice in the treatment of apoplexy, and also in eclampsia. Even tuberculous patients were often helped. He stated that it was also useful in chlorosis by stimulating the blood-forming organs.

Dr. Olmstead, in discussion, said that he had not had much experience in blood-letting, but thought it was indicated in conditions of high arterial tension, lividity, and engorgement of the right ventricle, such as is often found in pneumonia and some conditions of the heart. In using it in

cerebral cases we should be very careful, because if the case were one of thrombosis blood-letting would be contraindicated. In chlorosis, he would stick to iron.

Dr. McPhedran said he could not agree with Dr. Harrison's statement that pneumonia was more fatal in the hands of the modern practitioner than formerly, and he had seen statistics to prove this. The object of blood-letting was to relieve the right ventricle. This could be done, in a great many cases, effectually by bleeding the patient into his own vessels by using nitro-glycerine. The speaker had proved this by experience.

Dr. R. A. Reeve said that blood-letting by means of leeches was very serviceable in certain forms of disease in the eye and ear.

Dr. Bromley related an interesting experience he had had with leeches.

Dr. Arnott, of London, said he had proved the beneficial effects of blood-letting in meningitis and in inflammations of the eye and ear.

Dr. McKinnon, of Guelph, said that he had seen beneficial results from blood-letting in eclampsia, pleuritis, and pneumonia, and strongly recommended it in eclampsia.

Dr. Birkett, of Montreal, had seen good results in mitral stenosis in old people from blood-letting by nature's method—epistaxis.

Dr. Barrick related a case of eclampsia where everything else had been tried. Blood-letting afforded immediate relief. He would not advise its use in anæmia.

The president then said that in his younger days he had seen a great amount of blood-letting, and when it went out of use he had given it up, except in eclampsia.

Dr. Harrison closed the discussion by saying that he had tried nitro-glycerine, and was not satisfied with it as was Dr. McPhedran; he preferred the lancet.

THURSDAY MORNING.

The association, after the opening business, listened to an instructive paper by Dr. Holford Walker on the subject of

MASSAGE, AND ITS APPLICATION IN GENERAL PRACTICE.

He defined massage to be "the communication of motion to the tissues of the body, 'at best accomplished by the hands,' the motion controlled by the various movements adopted, and the force used." Strange to say, it would help directly opposite conditions; it would fatten the thin and reduce the fat. Unlike drugs, it did not unpleasantly affect the system. Its effects were mechanical, reflex, thermal, and electrical. The doctor explained how the body cells were stimulated, the movement of the blood quickened, the absorbents stimulated by the first;

how the nervous system was soothed by the light stroking used in the second; how the muscular exercise induced the thermal effects; and, lastly, how the electrical effects were manifested in effecting cures in an unexplainable way of various paralyses of the body. Massage was particularly useful in neurasthenia, rheumatism, rheumatoid arthritis, fractures, sprains, constipation, sciatica, and many other diseases. Even the weakest patients can stand it.

The president said that he had once used massage in his practice, but had let it fall into disuse. He would again make it a study.

Dr. Hunter endorsed all that Dr. Walker had said. He had tried it with gratifying success in fractures. It had given splendid results in the various neuralgias.

Dr. McKinnon, of Guelph, then followed on the subject,

ACUTE GENERAL PERITONITIS: LAPAROTOMY, AND RECOVERY.

He gave a history of the case. The subject was a pale girl, and the attacks sudden and severe. Morphine gave only partial relief, and, after consultation, operation was decided upon, pulse being 100, temperature 101°, and tympanites great. After incision it was discovered that upon the lower anterior wall of the stomach, about two inches from the left extremity, adhesions were found, which, on being separated, disclosed an old ulcer. The distension made it extremely difficult to close up the incision; so much so that the prepared silkworm gut broke, and unprepared silk was used. A drainage tube was left in until the second day. The patient subsequently developed an attack of pneumonia, followed by phlebitis, occurring successively in the left leg, the right leg, and the left arm. These attacks he considered were septic, and due to the suppuration arising from the stitch holes of the unprepared silk. The question, when to operate, is a serious one. In idiopathic and some forms of puerperal peritonitis, the opium treatment was sufficient; but in the perforated variety, unless considerable shock be present, operation was indicated.

Dr. Graham asked his opinion of laparotomy in perforation of typhoid fever.

Dr. McKinnon replied that he had had no experience in operating for that condition.

THE FAILURES AND SUCCESSES OF BROMOFORM IN THE TREATMENT OF WHOOPING-COUGH,*

by Dr. Duncan, was the next paper read. He cited cases where it had been used with little or no effect, and some cases where it had had a toxic effect. Being narcotic, it somewhat unfavorably influenced the general condition of younger children. It was found

* Will appear in THE PRACTITIONER.

by some who tried them that bromide of potassium and chloroform did better. The doctor then gave some reports of its successful use among Toronto and outside men. Some reported that it did not shorten the disease, but cut short the paroxysms. In his own practice he had found, where a small dose was ineffectual, that increased doses gave great relief. It should be carefully prescribed, as there was a case reported where one drachm had been prescribed with four ounces of water, a teaspoonful being the dose. The last dose killed the patient.

The association then divided into sections, the discussion on whooping-cough going on in the Medical Section.

Dr. Stalker, of Ridgetown, said that he had had an epidemic of pertussis in his practice, and that he had tried bromoform, but he found quinine to be better. His treatment was quinine and fresh air.

Dr. Hunt, of Clarksburg, said that he agreed with Dr. Duncan. He had gone through an epidemic of pertussis and found bromoform exceedingly useful, especially in shortening paroxysms.

Dr. Duncan closed the discussion by saying that he would not use bromoform to the exclusion of all other drugs. He would not give it more than three times a day and once during the night.

THE NATURE OF FEVER, AND ITS PHENOMENA AND TREATMENT, was the subject dealt with by Dr. Holmes, of Chatham. He said that this subject was at the present time employing the attention of some of the ablest men of the profession. The processes which govern the maintenance of the temperature, he said, were but imperfectly understood, and that heat loss was not always uniform, neither was heat production; and, in order that a uniform temperature might be kept, the mechanism governing it must be in intimate relation with heat production and heat loss. Heat production was the result of retrograde tissue change. Four-fifths of the body heat was generated in the muscles. The increased respiratory and cardiac action he explained to be dependent on the increased temperature of the blood. There might be rise of temperature without fever, and also fever without rise of temperature. Dr. Holmes wondered why the profession were hunting around for new remedies when the cold bath was at their disposal. By using it in one hundred cases of typhoid fever, his death rate was only two.

In discussing this paper, Dr. McPhedran said that cold baths were a means but not a specific in fever. He then gave an account of how he would use the cold baths in the various fevers. This, he said, was excellent treatment in the summer diarrhoea of children. The baths ameliorated the symptoms in typhoid, but did not eliminate the poison.

Dr. Hunter fully agreed with Dr. Holmes and Dr. McPhedran.

Dr. Bromley said that he had used jars filled with cold water placed about the patient, but did not use the bath. In typhoid fever, he used the cold bottles and antiseptics.

Dr. Rice asked Dr. Holmes if he would use the bath in a case of summer diarrhoea with a cold surface and an internal temperature of 103° or 104° .

Dr. Holmes closed the discussion by saying that the cold bath shortened the duration of the disease and prevented many nervous symptoms arising. As to Dr. Rice's question, he stated that he had always got excellent results from the cold bath in all cases of summer diarrhoea; he also used massage of the extremities. It had always stopped the convulsions, in his experience, also.

Dr. McPhedran then presented a case of

ABDOMINAL ANEURISM.

After giving the patient's history and showing the members the area of the tumor and of the pulsations, he proceeded to describe the treatment. The patient had come to the General Hospital a year ago last March, and had been kept in bed until October. The treatment was that adopted by Balfour, of Edinburgh—iodide of potash and nitro-glycerine. The nitro-glycerine was increased until the pulse became very small, and soft. He began with 1-100th of a grain and increased it to 1-50th. The diet was light and nutritious, and as little liquid was given as possible. The tumor gradually lessened in size until August, but from August until October there was little change, when he was allowed to go home, with the injunction that he was to do no hard work. However, he worked hard all winter. Now the tumor was somewhat larger than it was. However, the patient was very materially relieved, if not absolutely cured.

Following this was a paper on

THE PREVENTION OF TUBERCULOSIS IN ONTARIO,*

by Dr. E. Herbert Adams, of Toronto. In opening his paper, Dr. Adams gave some statistics showing the immense death rate occasioned by this disease. In Ontario it had claimed 24,437 victims between 1880 and 1890. Thirty-four per cent. of the patients admitted into the Sick Children's Hospital, Toronto, for the same period were tubercular in character. Then, too, the doctor spoke of its ravages among the lower animals, and the danger of their transmitting the poison to human beings; for there was no doubt, in the minds of those who had studied the matter, in regard to its contagiousness. The speaker then dwelt on the predisposing causes of the disease, heredity and unsanitary surroundings being the principal. To lessen this scourge, Dr. Adams recommended the reporting of all cases to the public health department, the inspection of milk and

* Will be published in THE PRACTITIONER.

meat by qualified men, the death of all affected animals, receptacles for sputa in public places, such as railway stations, thorough disinfection of houses after the death of patients, the complete separation of first cases in prisons, etc., and the erection of special hospitals for patients suffering from this disease.

Dr. Burns now read a paper on

POLYMASTIA.

The case was that of a woman who, in her third confinement, complained of swelling in both armpits. She had noticed it before her second confinement also, but not after the first. After the second she noticed a constant oozing in the left axilla, which was much aggravated after the third. On examination a supernumerary mammary gland, quite distinct from the gland proper, and which had a rudimentary nipple about the size of a split pea and from which fluid like milk exuded, was found. This fluid, examined under the microscope, showed the presence of colostrum corpuscles. In the right axilla, in a corresponding position, another one was found. The doctor thought that, if secretion were encouraged, lactation would go on as well and as long from them as from the *mammæ* proper.

Dr. Primrose said that he had examined the patient, and had found the supernumerary glands quite distinct. He had also examined the secretion from them under the microscope, and had found colostrum corpuscles. The mammary gland, he said, was of the same origin as the sebaceous gland.

Dr. Howitt, of Guelph, next addressed the association on

APPENDICITIS.

He stated that the authorities differed greatly as to the treatment of the disease. The preliminary abscess was usually intra-peritoneal. The appendix generally had a short mesentery. It varied greatly in size and position. This disease was commonest in the young and in males, and was often not manifest during life. The cause, he opined, was ulceration of the mucous coat, caused by *fæcal* concretions of foreign bodies. After giving the various points in the diagnosis, the doctor spoke of treatment; rest in bed, opium, easily assimilated food were recommended. After the pain had subsided, if twenty-four hours had elapsed, an enema should be given. He would not use calomel. If the symptoms became aggravated and the temperature fluctuated, operation would be necessary. As a rule, this should be done on the third or fourth day, if it is certain pus is present. The doctor described the method of operation in the different forms. He had operated twenty-four times with good success. He then outlined the history of eight cases where the seat of trouble was not in the right iliac fossa.

Dr. Temple then said that he had only the highest words of commendation for Dr. Howitt's paper. He (the speaker) thought that the diagnosis was at times very difficult. He agreed that it was also very difficult to say in some cases whether one should operate. If the abscess were allowed to rupture into the peritoneum, it was a most serious matter.

Dr. McFarlane also referred to the excellence of the paper. He said that he was much interested in the subject. He agreed with Dr. Temple in the difficulties he had referred to. The doctor then gave a brief history of a typical case, pointing out the most interesting points. Very many cases would recover if left alone.

Dr. Hillary then outlined the history of two cases he had had. In the one he had refrained from operating, and the patient had died; in the other he had operated and found nothing. But, in the latter case, the abscess burst into the bowel, and the patient recovered.

Dr. Howitt then closed the discussion by indicating some of the symptoms which would lead him to operate. They were the increase in the size of the tumor after the third day, accompanied with pain which opiates failed to control, and the appearance of the septic temperature chart.

Dr. A. B. Osborne, of Hamilton, followed by reading a paper on

GONORRHOEAL OPHTHALMIA, INCLUDING OPHTHALMIA NEONATORUM.

He described the peculiar manner in which the gonococcus attacked the conjunctiva, how its virulence depended upon the amount of the invading poison, how the conjunctival secretion was inimical to the poison, and how the quickness with which the eye could close, making it difficult for the finger to touch the conjunctiva, was the reason it often escaped infection. He gave an elaborate description of the various symptoms, both of the earlier and later stages, and also of the sequelæ and complications. He advocated general as well as local treatment. At first, he would treat with antiseptic lotions and cold, and later by astringents, if called for. If the cornea became infiltrated centrally, he would advise atropine; if circum-corneal, eserine would do good. Opium should be given if the pain called for it. Antiseptic midwifery was doing much for the prevention of ophthalmia neonatorum. Its treatment was similar to that of the other. Prevention in both was better than cure. Doctors should advise all patients to be exceedingly careful as to cleanliness. The pregnant woman, if she has any discharge, should be treated before delivery. This was the most fruitful cause of blindness. In the Institution for the Blind in Brantford 16 per cent. of all cases of blindness were traceable to ophthalmia neonatorum.

SURGICAL SECTION.

The minutes of the last session were read.

The next paper handed in was written by Dr. Groves, of Fergus. It dealt with a case of

LAPARO-ELYTROTONY.

It was a case of a young woman, her first confinement, under Dr. Chisholm, of Wingham. She had been in labor two days and two nights; when Dr. Groves arrived he found her much exhausted. A solid bony tumor filled the pelvis; the antero-posterior diameter of which was less than an inch. An operation was decided upon, although the surroundings were unfavorable. They incised on the right side, parallel to Poupart's ligament, commencing close above the symphysis pubis and extending six inches, a sound being passed through the urethra into the emptied bladder. The section was continued into the vagina, and the child, a strong, healthy girl of average size, extracted. The mother died, but the child lived. The doctor said this operation was much safer than Cæsarean section. He concluded by saying that it was never justifiable to deliberately destroy one human life when there was reasonable hope of saving both.

Dr. P. P. Burrows, of Lindsay, then read a paper on

TREATMENT OF TALIPES-VARUS BY CONTINUOUS EXTENSION.

It was unnecessary, he said, to enter into an anatomical description of this deformity, as he had entered fully into the question in the case reported in the *Canada Lancet*, June, 1887. In the case reported he divided the contracted tendons, the plantar fascia, and muscles. Next morning he applied a plaster of Paris splint, with cotton batting padding. After ten days a small portion of the splint below the ankle joint was removed, the foot over-corrected, and fresh plaster applied to secure it in the new position. In thirty days he removed the splint and found the limb perfectly straight. He then had a laced boot put on, stiffened on its inner side.

Dr. Powell, of Ottawa, asked what age the child should be before the tendons should be cut.

Dr. Burrows said that in the child reported the age was four.

Dr. Bryans asked how long the plaster of Paris splint should be left on in a marked case. Dr. Burrows replied that he left it on thirty days.

Dr. Sullivan, of Kingston, asked Dr. Burrows how many cases he had used traction on. He also wanted to know if he would operate before the fourth year. He (Dr. Sullivan) thought that great deformities could not be overcome before the fourth year by traction; nor could talipes varus be overcome where there was contracture of the tendons, etc., without section.

Dr. Burrows said that a moderate case of talipes, if left untreated, became much worse if left long as a result of contraction. He thought counter-extension rational treatment.

Dr. B. E. McKenzie then stated that different specialists had different modes of treatment. He thought no one line of treatment could be adopted for all cases. He said that in children he was cutting less than formerly, and that he never cut the tendon under one year. Often in talipes time was lost in extension when the knife should be used.

Dr. Temple's paper came next :

A FEW BRIEF REMARKS ON SOME OF THE DETAILS WHICH LEND
SUCCESS IN ABDOMINAL SURGERY.

One secret, he said, was attention to details ; another was experience ; another was a good knowledge of the peritoneum, and more especially of its delicate epithelial coat. The patient should be thoroughly anæsthetized, and kept fully under during the operation. The instruments should be sterilized, the surgeon's and his assistant's and nurse's hands should be carefully cleansed ; the sponges should be boiled, and the abdomen around the place of incision made aseptic. It was not necessary, as was done formerly, to completely dry the peritoneal cavity ; the sponging was often done too vigorously, causing inflammation of the delicate membrane. Where it was indicated, Dr. Temple would flush out the cavity with plain boiled water, moderately hot. This had not only a cleansing, but a general stimulating effect, as well as being helpful in arresting hemorrhage. He advised the drainage tube in those cases where there had been adhesions, with more or less oozing, and to be removed within the next forty-eight hours, depending on the color of the fluid. He had not had a case of hernia follow its use. He was not in favor of giving opiates after the operation. No food should be given for twenty-four hours. To relieve thirst, a couple of ounces of water with a little salt in it was useful as an enema. The patient should be kept warm. If tympanites appeared, he would give calomel, followed by mag. sulph.

Dr. Barrick said that he fully endorsed what Dr. Temple had said.

Dr. Atherton said that he agreed with Dr. Temple except in one point : he would not use hot water to wash out the abdominal cavity if there was no pus or other deleterious matter present. When he did use water he would not use it very hot, as in one of his cases he feared the peritonitis which followed the operation was due to it.

Dr. Howitt asked Dr. Temple if he would remove all the fluid from the cavity after the operation before he sewed up. In regard to the drainage tube, he thought that the walls of it should be thick and the holes small, so as to prevent the soft tissues protruding into the opening.

Dr. Powell, of Ottawa, asked Dr. Temple how he would treat the pedicle, and how he treated the abdominal wound externally.

Dr. Powell, Toronto, asked if salt might be advantageously added to the flushing fluid, and what the temperature of the water should be—whether near the highest or lowest allowable temperature.

Dr. Cameron gathered, although he had not been present, that the points of discussion referred to the use of sponges and the drainage tube. The practice of making the "toilet" of the peritoneum had fallen into disuse, and he thought, to some extent, unmerited disrepute. This was, perhaps, on account of the way in which the sponging was done—there was danger that the delicate lining of the peritoneum might be rubbed off. He thought it well to leave it as clean as possible, as any blood clots left would make a nidus for germs. If there was much irrigation, his practice was to pass a sponge into Douglas' pouch and also one into the anterior cul-de-sac, which he removed just before the completion of the operation. Regarding drainage tubes, he said they might be a source of infection. Kelly had pointed out that the tube was a septicode. Therefore, he advised that it be removed as soon as possible; and in regard to its use he would reverse the old maxim, "When in doubt, use the drainage tube," to "When in doubt, do not use the drainage tube." He found that if left in for a period not exceeding forty-eight hours, it did not militate against the closure of the wound. For the immediate purpose of getting rid of deleterious material from the operation, or for warning one of the presence of hemorrhage, the drainage tube was very serviceable. If there were any holes in the side of the tube, they should be as small as possible. If one feared that the lower end would be plugged by soft tissues, it might be obviated by filling the tube with iodoform gauze, allowing the end of the gauze to extend beyond the tube. It would then also establish capillary drainage.

Dr. Temple closed the discussion by saying that he would not use hot water, but warm water. In the case of a simple cyst, he would not use any. He used silkworm gut in stitching up; then he sprinkled on the wound dry iodoform and applied a dry dressing.

In reply to Dr. Powell, of Ottawa, he said that the treatment of the pedicle did not vary much now; that he treated it by simply dropping it back into the cavity after ligation. He ligated by the transfixion method, and did not sear the stump in simple cases. Respecting Dr. N. A. Powell's point, he said he thought salt might be added without the slightest injury. With regard to Dr. Hewitt's question, he said he allowed most of the water to run out, and squeezed a good part of the rest out by pressure on the sides of the abdomen. If there was a little left, he would draw it off through a drainage tube by means of a glass sucker. He advised the use of a small

drainage tube. He could not tell the exact temperature, as he merely tested it with his hand.

Dr. Sloan, of Kingston, asked in what proportion of cases did hernia follow the use of the drainage tube. Dr. Temple replied that it had followed in none of his cases.

Dr. Mackenzie followed by reading a paper on the

MECHANICAL TREATMENT OF TUBERCULOSIS OF THE KNEE-JOINT.*

The doctor had four patients present in varying stages of the disease wherewith to show the nature of the splints used. He first described the mechanism of the joint. It was the joint most often affected by this disease. Fortunately, it (the joint) could be put at rest without confining the patient to bed. The two points in the treatment were to allow the patient to walk without putting the foot of the affected limb to the ground, and in cases of flexion with sub-luxation to correct them. The first was accomplished by the use of a Thomas splint, which the speaker described. The second was accomplished, if the case had not gone far enough for operation, by employing continuous traction from the bottom of the splint. When convalescence had taken place pretty well, the doctor showed how to modify the splint so that part of the body weight might be transmitted through the affected limb to the ground. The cases, whose histories were given fully in the paper, were very instructive.

The report of the nominating committee showed that Dr. L. McFarlane, of Toronto, had been chosen as the next president. He was duly installed.

After listening to the report of the general secretary, which was a full and able one, and to the reports of the various committees, and to the general routine closing matters, the convention was adjourned.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER.

SIR,—It has occurred to me that a few notes of a trip taking in the meetings of the American Medical and other associations, some of the health resorts of the west, and the World's Fair, might be of interest to some of your readers, especially as the account of the latter may contain some hints for intending visitors. The C.P.R. train leaving Toronto at 7.20 p.m. was chosen as giving the best opportunity of taking leisurely the

* Will appear in THE PRACTITIONER.

evening meal before leaving, and breakfast on the dining car before arriving. *En passant*, it may be a matter of gratification to us Canadians to find in the remarks upon the transportation building in the official guide to the World's Fair the statement that the C.P.R. train is the most luxurious in the world.

Stopping a day in Chicago, Omaha was reached in time for the last day of the meeting of the Association of Railway Surgeons. Here were read many papers of interest. This association appears to lay itself out to discuss with especial prominence some one subject or group, and at this meeting the spine was selected. Some of the features of this discussion may, with your permission, appear in a future issue. Here and *en route* were met Dr. and Mrs. R. W. Bruce Smith, Dr. and Mrs. Riordan, Dr. H. R. and Miss Elliot, Dr. W. Gunn, and Dr. and Mrs. E. A. McGannon. The last-named gentleman was elected one of the vice-presidents. On the day following the meeting, the Union Pacific Railway generously affording transportation, two excursion trains were started to Denver and the Rocky Mountains. Stops were made at several towns in Nebraska, citizens assembling at the stations to greet us, sometimes with the strains of a band, and carriages being on hand to "show the doctors the town." We were also treated to a sample of the varied moods which nature puts on on these western prairies and slopes. During the afternoon the bright sky to the north became suddenly clouded with an inky blackness, and we had one of those displays of the "artillery of heaven" which are seen to their best advantage on the boundless expanse of prairie or ocean. At the same time torrents of rain and hail were hurled against our cars with such force that umbrellas had to be raised in some of them. When the wind first rose in its fury, our train was observed to slow up. We were afterwards informed that a cyclone had passed a quarter of a mile north of us, and that the slackening of speed was to allow of jumping off if necessary, the porter of our car comforting the ladies with the assurance that "it wouldn't take much to blow de ole Santa Cruz ovah." After about half an hour a lull occurred, and we found ourselves rolling along in a very shallow but expansive lake studded with pearl-strewn islands. Then followed another season of stormy blackness, and then a fine sunset.

As soon as we were astir next morning, the foothills of the Rockies were in sight. The renewed admiration with which one approaches this grand chain of giant sentinels was increased by a combination of circumstances which showed us the full glory of Long's Peak. The sun's rays were just at the proper angle to light up the mass of bright-frosted silver, streaked with ridges of a darker hue. Passing on through a long upward slope of plain, covered with round and flat cacti and sage bush, we reached Denver, and, after a short stay there, proceeded to Colorado Springs.

Hence we ran over to Manitou by the electric railway, catching glimpses of some of those curious monoliths and groups of rocks which constitute "the garden of the gods." The members of our party who drove through the "garden" gave us wonderful descriptions of the sights they had seen, and the remarkable resemblance on a huge scale to various animals. As the afternoon was cloudy, Dr. Riordan and I hurried through the drizzle to the cogwheel railway to make the ascent of Pike's Peak before dark. We were aware that it was probably snowing up aloft, but our scientific ambition would not down, and we were rewarded for our pains. We had some clinical experience, both objective and subjective. Out of a party of about sixty, two were rendered completely *hors de combat*, whilst many more felt "queer." One lady was so prostrated as not to be able to leave the car. She was not in our car, but I was told she had to remain lying down, and that she was very ill. A youth who returned in our car was very faint, and was attacked with cramps and diarrhoea. Whether this latter condition was most due to the change of pressure, the cold, or some irregularity in diet, I cannot say. As regards the subjective experience, when we reached a height of 11,000 feet, I had sensations of giddiness and muscular weakness, and a dull pain over the base of the heart. These symptoms did not increase during the further ascent to the summit (14,147 feet), except the muscular weakness, and I had about the same difficulty in walking into the little refreshment house that one would have after an illness. My friend Riordan said afterwards that I looked pale and pinched, as if I "had been dead about two weeks." I am able to vary the compliment by telling him that his face and throat were about the shade of a half-ripe purple egg-plant—a crimson purple. One of the men who had been engaged in the construction of the railway told me that the workmen could not do more than an ordinary half-day's work in a day, even though they had resided for years around Manitou and Colorado Springs. Before reaching Denver, some of us had found we could not run as far without dyspnoea as we can in Ontario. In some recent issues of the *Globe* and *Mail*, I have seen articles in which these results were attributed to the diminished amount of oxygen per volume of air, and no notice whatever is taken of the mechanical effects of diminished atmospheric pressure on the circulation and respiration. This subject is a complicated one, and would take too much space to discuss it in this letter, and point out the reasons of different effects on different persons (*e.g.*, those recited above), and why the higher altitudes are not suited to persons with weak heart, and to persons of hemorrhagic tendency, and why medium altitudes are so much better suited to some.

Of course we were sorry that the day was not such as would enable us to take in the grand cyclorama which, on a clear day, is spread at the feet

of him who stands on the summit of Pike's Peak ; but we consoled ourselves with the reflection that it is not everybody who sees trees feathered out by a four-inch snowfall, and handles icicles one and a-half inches thick, in the month of June.

Our cars were pulled down to Denver during the night, and on the following day we went in observation cars up Clear Creek Canon to a little mining town called Silver Plume (between 10,000 and 11,000 feet). Here a few of our party experienced some giddiness, and many noted the inability for rapid exercise. The trip was a most enjoyable and exhilarating one. The rushing stream, the apparently impassable outlooks, and the way we curved our way in and out, reminded me of Kicking Horse Pass, which you, Mr. Editor, will remember in our C.P.R. trip of 1889, whilst further on we had a repetition of the "Loop." The scenery around the Loop is, perhaps, not quite so massive and rugged as in the case of the C.P.R. "Loop," but it has instead, as one of its central points of view, pretty little Georgetown, with its brightly-painted, picturesque little houses, which we pass, and which appears and disappears again and again, until at last we see it away down behind and below us like "one of the little toy villages which delight the children at Christmas," as one lady remarked.

On returning to Denver I was met at the station by Dr. Rogers, a native of our province, who kindly drove two or three of our party and showed us the sights, amongst them the principal hospital, and in it a patient from whom he had removed the cassarian ganglion for the relief of facial neuralgia. Our party had divided in the afternoon, some going north to Cheyenne and the Hot Springs. The rest of us, after spending a few hours in this beautiful city, returned directly *via* Omaha and Council Bluffs to Chicago. I know that my Canadian fellow-travellers will join me heartily in an expression of thanks to the Union Pacific and Chicago and Rock Island Railways, and to Drs. Galbraith and Harvey Reid, president and secretary of the N.A.R.S., for the courteous and generous treatment received during this trip.

From Chicago we ran up to the meeting of the American Medical Association at Milwaukee. Want of space will prevent me saying much about this meeting, which will be fully reported in the journal of the association. There were, of course, some excellent papers, some of which in the surgical section I had the pleasure of hearing, as also Mr. Ernest Hart's graphic paper on "Water pollution of cholera." This contained some very interesting instances of the truth of this generally received theory of the propagation of cholera. I must, however, take exception to his remarks about quarantine measures. It is all very well to say that our water supplies should be exempt from all danger of faecal pollution—so they should, and we ought not to cease our efforts in this direction until

they are so—but, in the meantime, why should we allow germ-bearing alimentary canals to come in and add their specific germs to this pollution ; and, if a case slips through here and there, is it logical to say or do anything to still further weaken the barriers, and thus multiply the risks ?

At a meeting of the Chicago Medical Society about ten days later, Mr. Hart did some very plain speaking regarding their unsatisfactory mode of keeping—or not keeping—statistics regarding their water supply. This paper confirmed me in the resolution I had already acted upon of not taking Chicago water “in its purity,” as our Hibernian patients would say, but only in the forms of soup, tea, or coffee, or otherwise boiled. One thing more it suggested to me—not to place too much confidence in the tanks at Jackson Park bearing the legend “sterilized water,” coupled with some such further remark as “This tank contains water specially prepared for drinking, and must not be wasted or used for other purposes.” Mr. Hart asserted that these inscriptions did not prevent the bacteria from varying from 500 to 2,500 per c.c.—a suspicious variation. There are two other kinds of drinks to the safety of which I may allude—the artificially aerated waters, of course, and the Waukesha spring water. This latter is said to be piped into Chicago from the abundant and magnificent supply of Waukesha. It is tapped and procured by the consumer by “dropping a penny in the slot.” I was rather puzzled, however, by reading on some of the fountains something about a flavoring of “Wild Cherry.” This may have been contained in a tank over which Waukesha water was placed after being drawn from the pipes, but I must confess that I did not properly investigate the subject, and merely wish to give my medical friends data to work from. I can assure them, however, that by adopting proper precautions well known to them they can safely visit the White City.

It is unnecessary to say that amongst these precautions I do not include the one fallacy of adding alcohol (or corrosive sublimate), “to kill the bacteria.” Those who perpetuate that jocular phrase know that the bacterium can stand these decoctions at least as well as the stomach of the biped.

Before leaving the great exhibition, I may add, for the information of those who take up their quarters in the other portion of the city, that the most comfortable and speedy way of reaching the former is by the fast trains of the Illinois Central from the foot of Van Buren street (fare, 10 cents each way ; time, 15 minutes). I would also advise all who can to choose for the first visit a fine *morning*, and take one of the World's Fair steamers from foot of Van Buren street. The first impression which they will thus receive will be with the sun at their backs, lighting up gloriously the noble columns of the Peristyle and the other buildings, which are seen to the

best advantage by this clear approach from the lake (fare, 15 cents; time, 1 hour). Once also the visitor might take the Cottage Grove cable cars from Wabash avenue to the western entrance of Midway Plaisance (fare, 5 cents; time, 1 hour). This gives the variety of a pretty city-drive, and saves the double journey through Midway on the day one intends to "do" this part of the exhibition. No doubt many whose chief object is the exhibition will save time and energy by billeting themselves near the grounds, where there is ample accommodation. Buy Rand McNally's official guide now and read it cursorily through before you go; but bear in mind that the Anthropological Building has been added since it was written, and this divides, with the Manufactures Building, the surgical hospital and hygiene exhibits. It contains models of the Johns Hopkins and other buildings. It is under the courteous direction of Dr. Brewer. Be sure to register early at the Canada Building, near the Fisheries, and to go to the roof of the Manufactures Building and get the lay of the land. Make use of the intra-mural electric railway for the same reason, and also to husband your strength.

I would like to describe Dr. Senn's surgical clinic, where so much was compressed into one afternoon, and also a pleasant reunion at the monthly dinner of the Practitioners' Club, where Mr. Hart, Prof. Notter, of Netley; Prof. Finkler, of Bonn; Prof. Jurgens, Dr. Gerard, and others, were also guests. Amongst kind friends to be found in Chicago are several Canadians: Dr. Sanger Brown, 24 Washington street; Dr. F. C. Coleman, of the Post-graduate; and Dr. Reynolds, health, commissioner, and many others.

MEDICO.

Toronto, July 8th, 1893.

To the Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—I notice in the last issue of THE PRACTITIONER a letter signed by Drs. E. A. Praeger and M. S. Wade, in which they assume that I exceeded my duties as Registrar of the Medical Council of this province at the last election.

I might say at the outset, for the information of your readers, that in this province nomination of candidates are not made officially or otherwise, and Drs. Praeger and Wade are cognizant of this fact. It was therefore impossible for me or any one to make an "official list"; so on no consideration can this charge be sustained.

It is quite possible, in answer to a private communication asking me who were standing for election, I gave the names of those who, to the best of my knowledge, were seeking election, but no official list could be given, for the reason already mentioned. I surely had the right to answer my own private correspondence, and even the question as to who were in the field.

When the enquirer penned the letter, he must have certainly expected me to answer him. If not, why did he ask me the question? If I had not done so, I would, no doubt, have been accused from the same source as being an uncivil and discourteous official.

The members of the Medical Council are cognizant of the whole matter, which was brought before them at the last meeting of the board. In justification to myself, I refer your readers to the last clause of the late president's annual report, which is appended, and has been written since the late election took place, and they will be able to judge as to whether my conduct has not been worthy of the position in which I have the honor to be placed. I remain, yours respectfully,

G. L. MILNE.

I cannot close this report without mentioning with satisfaction the harmony and good feeling which have existed among the members of the council during my term of office as president—in fact, during the whole time that I have been connected with the council. I desire also to call your attention to the efficient manner in which the officers of the council have performed their duties, and would particularly mention the Registrar, Dr. G. L. Milne, who has devoted much of his time to promoting the interests of the council and of the profession, and who has discharged the delicate duties connected with his office in a manner which calls for the admiration of all. I have the honor to be, gentlemen,

Your obedient servant,

W. A. DEWOLF SMITH,

President.

New Westminster, B.C.,

April 30th, 1893.

Book Reviews.

THE TREATMENT OF CONSTITUTIONAL SYPHILIS. By Oswald Ziemssen, M.D., Wiesbaden. Pp. 800. Published by H. K. Lewis, 136 Gower Street, London, W.C. Price, 3s. 6d.

This little volume is a very careful résumé of the treatment of constitutional syphilis, and is full of good advice. The author quotes what Kaposi said in 1886 at the Congress of International Medicine held at Wiesbaden, that "syphilis should be regarded as a *curable* disease—indeed as the *most easily curable* of all infectious constitutional diseases"; to which he makes what he styles an amendment, and says that "the radical cure of constitutional syphilis is possible, but there is as yet no certain proof of this at our disposal, relapses having occurred even after many years." This is the great bugbear in the treatment of syphilis, that we cannot be absolutely positive that it is entirely eradicated from the system.

We cannot agree with the author when he advocates (page 17) that the constitutional treatment should commence as soon as the chancre is diagnosed. It is next to impossible to prognosticate in some chancres whether constitutional symptoms will appear or not—whether the lesion is specific or non-specific; whereas, if we await the appearance of the roseola, there can be no doubt about the infection. It has been our rule to await the appearance of the rash, and we are not convinced by the author that we should now do otherwise. The excision of the sore as a prophylactic measure, the hypodermic injection of mercury, and the thermal treatment are all fully considered. The book is a useful one to possess. The typography and binding are neat.

A SYSTEM OF GENITO-URINARY DISEASE, SYPHILOLOGY AND DERMATOLOGY. By various authors. Edited by Prince A. Morrow, A.M., M.D. In three volumes. Published by D. Appleton & Co., New York. Toronto agency, Geo. N. Morany, 63 Yonge street. Subscription only. Volume I., "Genito-Urinary Diseases."

At the present time, the profession appear to demand that the style of publications shall be in Systems or Cyclopædias. There can be no doubt that a work is of far greater value to its reader if the subject-matter in it is treated by an author more specially trained in that particular line of study. This appears to be the idea that Dr. Morrow has started out with, for he has associated with him some of the ablest men on the continent in the several branches on which they write.

"The Anatomy and Physiology of the Genito-Urinary Organs" are carefully gone over in this first chapter by Dr. Geo. Woolsey. "Diseases of the Penis" and "Diseases and Injuries of the Urethra" occupy the next two chapters, and are very carefully treated. The subject of Gonorrhœa is most exhaustingly handled—"Etiology of Urethritis," by Dr. S. Lustgarten; "Acute Urethritis," by Dr. Geo. E. Brewer; and "Chronic Urethritis," by Dr. W. K. Otis. In these three chapters are contained a vast amount of information. The profession at large do not thoroughly recognize that gonorrhœa is a most serious disease; that its after-results are often the cause of untold misery. The perusal of these chapters alone will well repay the purchase of the book. The Endoscope is most carefully explained by Dr. Herman G. Klotz. "Stricture of the Urethra," by Dr. J. William White, is one of the most carefully prepared chapters in the book, and one can refer here when in doubt as to the procedure to follow in any case of stricture. Dr. Belfield has written also very exhaustively on "The Prostate and its Diseases." The surgery of the prostate is now just in its infancy; and when we consider the large number of patients who suffer from prostatic trouble, we can easily appreciate that this should be a very prolific field of surgery in the future. "Tumors of the Bladder," by Dr. Francis Sedgwick Watson, should be read by every practitioner. Cases occur in which these neoplasms, if diagnosed in their early existence, could be rationally and thoroughly treated; but, if allowed to become too extensive, it is beyond the possibility of cure.

We are a little disappointed in the chapter on "Varicocele," by Dr. E. L. Keyes. In a system such as this is, it does not seem proper to assume that all other operations are bad and useless simply because we do not use them. We should at least describe them, and make whatever comment we choose. The subcutaneous ligature of varicocele is by no means accepted as the ideal operation. There are other operations that produce a better result in a large proportion of cases. There is always the idea of uncertainty when working in the dark, and in any but expert hands this operation is dangerous.

There are very excellent chapters on the "Functional Disorders of Micturition," by Dr. Jos. D. Bryant; "Urinary Fever," by Dr. J. A. Fordyce; "The

Cystoscope," by Dr. William Meyer; "Stone in the Bladder," by Dr. Arthur T. Cabot; "Surgical Diseases of the Kidney," by Dr. L. A. Stinson; "Hydrocele and Spermatocoele," by Dr. J. A. Wyett and Dr. W. W. VanArsdale; "Gonorrhœa in the Female," by Dr. Andrew F. Currie; and many others, that are all excellent.

The publishers have been very fortunate in securing an editor for this system of Dr. Morrow's ability. He is an authority, and has a large experience in this line. The appreciated atlas of skin diseases was also published by Dr. Morrow. The typography, paper, and binding are all excellent, and reflect great credit on Messrs. Appleton. The next volume is devoted to Syphilology.

INTERNATIONAL CLINICS. A quarterly of clinical lectures on medicine, neurology, pediatrics, surgery, genito-urinary surgery, gynecology, ophthalmology, laryngology, otology, and dermatology. By professors and lecturers in the leading medical colleges of the United States, Great Britain, and Canada. Edited by John M. Keating, M.D.; Judson Daland, M.D.; J. Mitchell Bruce, M.D., F.R.C.P.; and David Findlay, M.D., F.R.C.P. Published by the J. B. Lippincott Company, Philadelphia.

This volume, like the previous ones, is really an excellent one. The opening clinic is by Dr. William Pepper on "Congestion of the Kidneys" and "Rheumatoid Arthritis." The two cases of congestion of the kidneys related are of great interest, and the result of the treatment was all that could be desired. The sulphate of sparteine in cases of this kind, in doses of from one-half to three-quarters of a grain, three times a day, seems to work very rapidly and effectively.

We can only take note of a few of the clinics. "Acute Infectious Osteomyelitis," by Dr. L. McFarlane, Toronto, is a very instructive one, and graphically describes this condition of the bones, as also does a case reported by George A. Peters, F.R.C.S., England, in the same clinic. Another very interesting clinic, and by a Canadian also, is that by Dr. Kenneth N. Fenwick, of Kingston, on "Retained Placenta." The many methods of treatment of these troublesome cases are very carefully gone over. The clinic on "Operations to Preserve the Uterine Appendage," by Dr. W. M. Polk, is of sufficient interest to the general practitioner of the present day to be reprinted, and this we have done in this issue. (See page 492). Dr. Polk has written very ably on this subject, and his work has proved that in a great many cases the patients can be permanently cured of very troublesome diseases of the appendages without unsexing them.

"Hypertrophy of the Prostate," by Dr. Francis B. Watson, of Boston, is of exceeding interest. This clinic is illustrated by seven large half-tone engravings of the condition described. Dr. Watson has done a great deal of original research in this particular line of surgery, and from his reports his success has been very great. This unfortunate condition, of such common occurrence, is at the present time amenable to treatment without great danger, and the writer anticipates in the near future that this operation will be much more frequently resorted to.

"Chronic Hypertrophy of the Faucial Tonsil," by Dr. George M. Lifferts, is on a subject of great importance to all general practitioners, and his advice when not to operate is exceedingly good.

This volume, taken as a whole, fully maintains the excellent standard of the series.

We have received the following pamphlets and reprints:

THE LITERATURE OF SEASICKNESS. By Dr. J. A. Irwin. Reprinted from *Medical Record*.

THE CURE OF COMPLETE PROLAPSE OF THE RECTUM BY POSTERIOR PROCTECTOMY. By John B. Roberts, M.D., Philadelphia. Reprinted from *The American Journal of the Medical Sciences*.

A CASE SHOWING SYMPTOMS OF LANDRY'S PARALYSIS: RECOVERY. By Alexander McPhedran, M.B., Associate Professor of Medicine and Clinical Medicine, University of Toronto. Reprinted from *University Medical Magazine*.

Medical Items.

DR. R. A. MCARTHUR has been appointed surgeon to the C.P.R. s.s. *Empress of China*.

DEATH OF PROFESSOR SCHNITZLER.—We regret to hear of the death of Professor Schnitzler, of Vienna, one of the foremost of modern laryngologists, who had done much to advance the science of the subject to which he had devoted his life. He was founder of the *Wiener Medicinische Presse*, and of a medical school extra-mural to the university, in which he never became a professor.

THE seventh annual meeting of the American Association of Genito-Urinary Surgeons was held at "The Four Seasons" hotel, Harrogate, Tenn., on Tuesday and Wednesday, June 20th and 21st. The programme was a very excellent one. The following officers were elected for the ensuing year: President, Dr. George Chismore, of San Francisco; vice-president, Dr. L. Bolton Bangs, of New York; secretary-treasurer, Dr. J. A. Fordyce, of New York; member of council, Dr. R. W. Taylor, of New York.

MEETING OF THE MARITIME MEDICAL ASSOCIATION.—The third annual meeting of the Maritime Medical Association was held in Charlottetown, P.E.I., July 12th and 13th. The following officers were elected: Dr. Walker, of St. John, president; D. A. Campbell, Halifax, vice-president for Nova Scotia; G. M. Campbell, Halifax, secretary; Dr. Dewitt, Wolfville, treasurer. A resolution was adopted that the medical council of each of the provinces be requested to procure such modifications and alterations in the existing laws as will secure, first, uniformity of curriculum of study to be regulated by the respective councils; second, examining boards as the sole authority for medical practice on the same lines as in Ontario, British Columbia, and Prince Edward Island.

NATIONAL ASSOCIATION OF RAILWAY SURGEONS.—The meeting of this association at Omaha, June 1st, was largely attended. The Canadian members of the association, with their wives, formed a pleasant party, and thoroughly enjoyed the hospitalities so generously extended to them by the different railways. They had a Pullman car to themselves from Toronto. After the meeting the Union Pacific Railway tendered the members of the association a complimentary trip to Denver and the mountains beyond. Drs. Oldright and Riordan, of Toronto; McGannon, of Brockville; Smith, of Seaforth; Gunn, of Clinton; Elliott, of Brucefield; Freel, of Stouffville; McArthur, of Berlin; and Stevenson, of Iroquois, have returned with pleasant recollections of western hospitality.

AMERICAN MEDICAL ASSOCIATION.—The forty-fourth annual meeting of the American Medical Association was held at Milwaukee, June 6th, 7th, 8th, and 9th, and was attended by over eight hundred medical men from all parts of the United States. Dr. R. A. Reeve and Dr. W. Oldright, of Toronto; Dr. J. A. Mathieson, of St. Marys; Dr. Ferguson, of Winnipeg; Dr. Bruce Smith, of Seaforth; and Dr. H. R. Elliott, of Brucefield, were present from Canada. The meeting, which was a most successful one, was presided over by Dr. Hunter

MacGuire, of Richmond, Va., the president of the association. The annual address in medicine, by Dr. H. A. Haer, of Philadelphia, on "A Brief Review of some Practical Advances in Medicine and Therapeutics," and the address in surgery by Dr. H. H. Mudd, of St. Louis, on "Surgical Problems," were highly instructive. An interesting feature of the meeting was an address by Mr. Ernest Hart, editor of the *British Medical Journal*, London, Eng., on "Cholera." The papers in the twelve different sections were very interesting. The amendment introduced by Dr. C. A. R. Reed, of Cincinnati, having for its object the extension of the association to embrace the Dominion of Canada and Newfoundland, was laid over for consideration at the next meeting, which is to be held in San Francisco. The profession in Milwaukee made the social features of the meeting a great success.

PAN-AMERICAN MEDICAL CONGRESS—SECTION ON GYNECOLOGY AND ABDOMINAL SURGERY.—All members of the medical profession are cordially invited to attend the meetings of this section to be held in Washington, September 5th, 6th, 7th, and 8th. The sessions promise to be exceptionally interesting, many valuable papers having been contributed. Those who may wish to read papers before this section, and who have not sent in their titles and skeleton abstracts are requested to do so at once. Papers have already been contributed by the following distinguished gentlemen from the United States and Canada: Drs. T. Johnson Alloway, Montreal, Can.; A. W. Abbott, Minneapolis, Minn.; J. M. Baldy, Philadelphia, Pa.; H. J. Boldt, New York city; Augustus P. Clarke, Cambridge, Mass.; Ernest W. Cushing, Boston, Mass.; Andrew F. Currier, New York city; L. H. Dunning, Indianapolis, Ind.; George R. Deane, Spartansburg, S.C.; W. E. B. Davis, Birmingham, Ala.; Joseph Eastman, Indianapolis, Ind.; George M. Edebohls, New York city; De Saussure Ford, Augusta, Ga.; William Gardner, Montreal, Can.; T. H. Hawkins, Denver, Col.; John R. Haynes, Los Angeles, Cal.; Edward W. Jenks, Detroit, Mich.; Joseph Taber Johnson, Washington, D.C.; Howard A. Kelly, Baltimore, Md.; Florian Krug, New York city; G. Betton Massey, Philadelphia, Pa.; Lewis S. McMurtry, Louisville, Ky.; R. B. Maury, Memphis, Tenn.; Wm. F. Myers, Fort Wayne, Ind.; E. E. Montgomery, Philadelphia, Pa.; Robert T. Morris, New York city; Charles P. Noble, Philadelphia, Pa.; Joseph Price, Philadelphia, Pa.; George H. Rohé, Baltimore, Md.; James F. W. Ross, Toronto, Can.; Charles A. L. Reed, Cincinnati, O.; I. S. Stone, Washington, D.C.; R. Stansbury Sutton, Pittsburg, Pa.; T. Algernon Temple, Toronto, Can.; A. Vander Veer, Albany, N.Y.; W. B. Ward, Topeka, Kan. W. W. POTTER, executive president; BROOKS K. WELLS, 71 West 45th street, New York city, English-speaking secretary.

OBITUARY.

DR. G. G. CRAWFORD, a graduate of Edinburgh in 1828, died at his home in Toronto, June 20th, at the age of eighty-four.

DR. THOMAS R. DUPUIS died at his home in Kingston on June 25th, after a brief illness. He was born in March, 1833, in the township of Ernestown, county of Lennox. He received his medical education at Queen's College, Kingston, graduating in 1860. He practised for a short time at Harrowsmith. After leaving this village, he spent some years in Odessa. In the spring of 1872 he went to Kingston, where he was in active practice up to the time of his last illness. In 1881 he went to England and became a member of the Royal College of Surgeons. He was successful in practice, and generally recognized as a man with ability above the ordinary, and great force of character. He was well known in medical societies, was vice-president of the Ontario Medical Association in 1882, and vice-president of the Canadian Medical Association in 1886. He was also well known as a teacher through his association with the Royal College of Physicians and Surgeons of Kingston, where he was professor of anatomy and clinical surgery.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor. JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

CASES OF SUB-PHRENIC ABSCESS.*

BY WILLIAM OSLER, M.D.,

Professor of Medicine, Johns Hopkins University, Baltimore.

THE following cases illustrate some of the forms of abscess beneath the diaphragm. Three contained air and simulated pyo-pneumothorax; in two, the condition was strikingly similar to empyema. The pus may be either in the cavity of the lesser peritoneum, which is commonly the case when perforation of the posterior wall of the stomach, or of the duodenum, occurs, and the abscess is then chiefly beneath the left half of the diaphragm; or it may be between the right lobe of the liver and the diaphragm, in which case the abscess is really within the general peritoneum, though usually shut off. The abscess may come from perforation of the ascending colon, or of the appendix, or from the liver itself. In the air-containing abscesses the most exquisite simulation of pneumothorax may occur on either side, as in the case which first called my attention to this condition, reported by Dr. Gardner,† of Montreal, in which the signs of

* Read before the Association of American Physicians, May, 1893.

† *Canada Medical and Surgical Journal*, vol. ix.

pneumothorax extended as high as the third right interspace, and in which, *post mortem*, the diaphragm was found at the level of the third interspace.

CASE II. is of interest from the development of an air-containing abscess, in consequence of the perforation of the colon and communication with a perinephritic abscess on the right side. It had perforated the diaphragm and produced a pleurisy at the right base.

In CASE III., on the other hand, there was, following injury to the kidney, an empyema which had perforated into the lung, and the sub-phrenic abscess received its air supply from this source, which is somewhat unusual.

The two cases of simple sub-phrenic abscess are of doubtful etiology, and are of interest chiefly from the remarkable simulation of empyema and the good results which followed operation.

CASE I. is one of the few instances in which the diagnosis of pyopneumothorax sub-phrenicus was made during life, and in which recovery followed operation.

CASE. I. *History of dysentery; symptoms of abscess of liver: development of a large area of tympanitic resonance in the right lower axillary region; diagnosis of pro-pneumothorax sub-phrenicus; operation; recovery.* John S., aged thirty-six, was admitted to the Johns Hopkins Hospital on January 16th, 1890, complaining of fever, diarrhea, and pain in the abdomen. There was nothing of moment in his family history. He had typhoid fever when twelve years of age. He had gonorrhea, but not syphilis. He has been a very hard drinker for very many years. In September, 1888, he had dysentery; not a very severe attack, as he was not laid up in bed; but the stools were frequent, and he passed blood and mucus. He has not been entirely free from intestinal trouble since, but he has been able to keep at work with but few interruptions. Latterly he has lost flesh, and within the past six weeks has become very weak and feverish. On several occasions the feet have swollen. He has had no chills; has never been jaundiced, and has never had severe pain in the region of the liver. He stopped work two weeks ago.

Condition on admission. Emaciated; weight 116 pounds; anemic, muscles flabby; skin hot, dry, and sallow; conjunctivæ white; tongue pale, indented, and with numerous aphthous sores on dorsum and sides. Pulse 96; respiration 30; temperature 101°. Lungs are normal, with the exception of a few dry crepitant râles, probably pleuritic, at the right base.

Cardiac dullness begins at the fourth rib. There is a soft systolic apex murmur. The second sound is reduplicated at base.

Liver. No prominence in hepatic region. No tenderness on pressure

Dullness begins in nipple line at fifth interspace and extends about 4 cm. below the costal margin, 15 cm. in vertical extent. The edge cannot be distinctly made out. The surface beneath the costal margin is not rough, nor tender. In the median line, dullness extends 3 cm. below the tip of ensiform cartilage.

Spleen not palpable. Area of dullness not increased.

The abdomen is symmetrical, a little full, tympanitic, nowhere tender. Examination of blood negative.

Urine. Specific gravity 1019; reaction acid. Trace of albumin. No tube casts.

The stools were frequent, liquid, and contained much mucus.

From the history of the case and from the appearance of the man abscess of the liver was suspected.

For the first ten days in the hospital the patient seemed better. The number of stools in the day reduced. He had no chills. On several occasions he sweated heavily at night. The temperature range was from 98° to 102°.

On the 24th it was noted that "there is distinct tenderness in the right renal region, best elicited on bimanual palpation. No special fullness. No dullness in the right flank. Liver dullness is not increased in the lateral region; in the posterior axillary line it begins at the eighth rib and extends to the costal margin."

January 8th. The tenderness on the right side has increased, and it is specially noticeable at the extremity of the tenth rib when pressure is made upward. There is here a distinct sense of fullness and resistance. To-day there was noticed on percussion a remarkably tympanitic percussion note between the ninth and eleventh ribs on the right side. An exploratory puncture, in the tenth interspace, posterior axillary line, obtained a small amount of curdy, thick pus, which contained altered pus cells, and a few fat crystals. The following note was dictated:

In the right flank the fingers can be passed well toward the kidney with, perhaps, slight sense of increased resistance. With bimanual palpation there is certainly great resistance below costal margin, and especially below points of the tenth and eleventh ribs; here there is also marked tenderness. From behind there is distinct fullness in the infra-scapular region on the right side, and intercostal spaces are here not so well marked. There is no distinct tenderness in right lumbar space beyond. Liver dullness in mid-sternal line, extends three fingers' breadth (5 cm.); in nipple line, from lower margin of the fifth to costal border. In mid-axillary line there is a pulmonary note to lower margin of sixth. There is dullness for a finger's breadth on the seventh rib, and below, the most extreme metallic tympany, extending from exactly the seventh interspace to upper margin of eleventh,

where it passes on insensibly into bowel tympany. There does appear, however, to be a slightly dull note before bowel tympany is reached. Anteriorly, the metallic tympany extends to within 4 cm. of nipple line. Behind, it extends to posterior axillary line. When turned on side, percussion in axillary line is distinctly flatter, and there is movable dullness. Altogether, tympanitic area occupies position of seventh to tenth interspace in a line drawn at the level of ensiform cartilage. A diagnosis of a sub-phrenic air-containing abscess was made, and the patient was transferred to the surgical department.

On the 29th Dr. Halsted resected about an inch and a half of the tenth rib in the mid-axillary line, and removed about a litre of a thick, grumous pus, which had an acid reaction, and very distinct odor of vomit. The patient rallied well from the operation.

February 2nd. The last few days the patient has had a slight elevation of temperature. His general condition, however, is good. The tympanitic note is even more intense than before the operation, and it is almost amphoric in character. It extends anteriorly as far as the nipple line, where it is only 10 cm. from the nipple line. The area is triangular in shape, the apex being toward the sternum. It is 15 cm. in transverse diameter. The liver seems pushed far over into the left hypochondrium.

10th. Since the last note the patient's condition has rapidly improved. The temperature has been but slightly above normal, the sweats have stopped, the diarrhea checked, and his appetite has become very good. The wound is dressed every day and the cavity irrigated. Dr. Halstead is now able to pass his finger far down into the flank, reaching quite to the level of the crest of the ilium. A flat tympany extends in the mid-axillary line from the lower margin of the eighth to the iliac crest.

14th. General condition remains excellent. The cavity has reduced very considerably and the discharge has lessened.

The improvement continued, and the patient was discharged well.

CASE II. *Tuberculous pyelo-nephritis; tuberculous colitis; perforation at splenic flexure of colon, with the formation of a perinephritic air-containing abscess; prominent tumor over tenth, eleventh, and twelfth ribs behind; incision and drainage; pulmonary tuberculosis; death; autopsy.* In October, 1887, I saw, with Dr. R. H. Harte, of Philadelphia, a case which illustrates a somewhat unusual form of this condition. He was a young man, aged about thirty, who, as early as 1880, had passed blood and clots with the urine, and was sent to California under the impression that he had Bright's disease. He lived a pretty hard life, and had been treated for stricture of the urethra and irritable bladder. When Dr. Harte saw him in July he had lost much flesh, was very pale, but was still fairly muscular. The urine contained pus and blood; the bladder was very irritable, and micturition was very frequent.

Early in September he had chills, which were supposed to be malarial with these the fever was high, and he sweated heavily. In the middle of October diarrhea of an obstinate character set in. When I saw him he was pale, somewhat emaciated, with an irregular fever and occasional chills, which were evidently of a septic nature. He had profuse diarrhea, and the stools, at times, contained small quantities of pus. The urine was very purulent. On examination of the abdomen nothing of special note was observed. Behind, on the left side, beneath the skin over tenth, eleventh, and twelfth ribs, there was a prominent tumor, somewhat hemispherical in outline, and nearly equal in extent to the palm of the hand. It was soft, not specially tender, and, on percussion, when he was in an erect posture or on his belly, gave a most remarkable tympanitic note. On the other hand, when he was on his left side or back the note was dull. On coughing there was a distinct impulse in the tumor. Anteriorly, there was nothing to be felt on deep pressure, but there was evident thickening and pain in the left lumbar region. It was thought at first that this projection might possibly be hernial, though in an unlikely position. Aspiration, however, revealed the presence of pus, and it was thought to be perinephritic abscess which had communication with the bowel. On November 1st he was taken to the University Hospital, and Dr. Agnew laid open freely the abscess. There was evidently communication with the bowel, as fig-seeds were, on several occasions, noticed in the dressing. Gradual signs of involvement of the left lung came on, and he sank and died about January 1st.

The *post mortem* showed extensive old tuberculous disease of the left kidney. An abscess cavity, the size of a cocoanut, surrounded it and communicated with the colon at the splenic flexure through an opening which would admit a lead pencil. The abscess had perforated the diaphragm and produced pleurisy at the right base. There was extensive and progressing tubercular disease of the right lung. The right kidney presented a number of small tuberculous abscesses. The bladder was thickened and contracted, and presented tuberculous ulcers. There was an abscess of the prostate which opened into the bladder. The ureters were thickened and ulcerated.

The condition has been met with following injury, as in the following case, which was transferred to my wards from the surgical side at the University Hospital, Philadelphia.

CASE III. *Injury to arm and back ; hematuria ; amputation of arm ; erysipelas ; three weeks after accident signs of inflammation at the left base ; development of a pyo-pneumothorax ; expectoration of fetid pus ; septic fever ; asthenia ; death ; autopsy.*

William S., aged twenty-four years, was admitted to the surgical wards

of the University Hospital on November 13th, 1885, having fallen under the wheels of an engine. The left arm was crushed, and he had a deep scalp wound. The arm was amputated at the upper third. For a week he had hematuria, and he complained of a pain in his left side. Subsequently erysipelas developed in both arm and face. About three weeks after admission signs of inflammation appeared in the left infra-scapular region, indicated by a rise of temperature, dullness, and feeble, blowing breathing, and he was transferred to the medical ward. The stump at this time had almost healed. Examination of the chest revealed a circumscribed dullness at the left base, extending nearly as high as the angle of the scapula, and, laterally, to the mid-axillary line. Tactile fremitus was diminished; on auscultation, feeble, blowing breathing, and, on deep inspiration, râles. Slight cough; very little expectoration. A septic pleurisy was suspected. The condition remained practically unchanged for several weeks, during which there was irregular septic fever. He complained at times of pain in the iliac region and left side, particularly when he drew a deep breath. He soon began to spit up fetid pus, and in twenty-four hours brought up several ounces. It was concluded that a localized empyema had perforated the lung. On examination, tympanitic resonance, amphoric breathing, and metallic râles were found low down in the postero-lateral region, beneath the eighth, ninth, and tenth ribs, indicating pneumothorax.

The autopsy showed the existence of a large abscess behind the left kidney and descending colon, extending from the diaphragm to the crest of the ilium. The chief part of the abscess lay above the kidney and beneath the diaphragm, and in this region there was a distinct cavity, partially occupied by dirty-brown pus, similar to that which the patient had expectorated during the last two days of his life. Part of the diaphragm was in a sloughy condition, and two orifices, through each of which the point of the index finger could be passed, communicated directly with an abscess cavity in the lower lobe of the left lung. The pleural membrane of this part was greatly thickened, and there was a small localized empyema between the layers. There were areas of recent broncho-pneumonia throughout the other lobe. The left kidney was small, and presented at its upper part a distinct cicatrix, to which the capsule and adjacent tissues were strongly adherent.

The sequence of events in this case was, probably, as follows: Wound of kidney with bruising of tissue in lumbar region; sub-phrenic abscess; localized empyema, probably from contiguity with sub-phrenic abscess; perforation of diaphragm and lung, with discharge of pus; development of a sub-phrenic air-containing cavity which gave, in the lower and lateral aspects of the left side, the signs of pneumothorax.

I regarded this case, when admitted to my wards, as one of septic pleurisy, passing on to empyema and perforation of the lung. The physical signs of pneumothorax were of the most characteristic kind, and I must confess that it never once occurred to me that the air-containing cavity was below, not above, the diaphragm.

CASE 4. Acute illness; signs of empyema; operation; pleura free; evacuation of large sub-phrenic abscess. John M., aged twenty-four, fireman, admitted April 30th, 1892, complaining of pain in the right side of the chest. Nothing of any note in the family history. The patient had measles when young; otherwise has been remarkably healthy. Denies excess in alcohol; admits gonorrhea, but has never had syphilis. His bowels have been regular; he has had no abdominal pains. The present illness began about a week ago, with headache, loss of appetite. He kept at work until two days ago, when the pain became very severe in the right side of the thorax, and was much aggravated by coughing and during a deep breath. He is positive that there was no chill, but he has had one or two heavy sweats. For three days his bowels have been loose, and he has had from five to ten stools a day, but has not noticed any blood.

On admission temperature 104°. He is a large, well-built, well-nourished man; lies upon the left side. Lips and mucous membranes of a good color; the cheeks are flushed; tongue has a whitish fur. Pulse is 92, regular in force and rhythm; respirations shallow, 36. The thorax is well formed; the left side moves more than the right.

Percussion. Resonance normal on the left side. On the right side the patient winces on percussion below the fourth rib. The flatness begins at the upper border of the sixth rib in mammillary line. Behind, the resonance is defective at the right base and in the lower axillary region, and possibly there the line of dullness in front varies slightly with the position. The fremitus is diminished over the flat area.

Auscultation is everywhere clear in the left chest and in the upper part of the right, but in the flat area the respiratory and voice sounds are diminished in intensity, and in the lower mammary region there are a few dry râles. The condition of the heart is normal.

The abdomen is full; the walls are tense. There was no tenderness, no glandular enlargement, and the only point of special moment was the distinct increase in the size of the spleen, the edge of which could be easily felt at the costal margin. The blood was negative as regards the malarial plasmodia. There was marked leucocytosis—18,000 white corpuscles per c.cm.

The urine presented a trace of albumin, was dark amber-colored, acid; specific gravity 1020.

The patient had a slight cough, with a muco-purulent, slightly bloody

expectoration, in which there were numerous cocci, some encapsulated. It was evident during the first week in the hospital that the patient was very ill. Every day the temperature rose to between 103° and 104° , occasionally reaching 105° and once 106° . The pulse range was from 100 to 120. He had at times heavy sweats, and on the 2nd of May he had two severe chills, in one of which the temperature rose to 106.2° . The dullness at the right base persisted, beginning in the back about the ninth rib, and in front in the recumbent posture at the fifth rib. There seemed very little doubt to Dr. Thayer, under whose care the case came, that there was pus in the pleura, and an aspirating needle was inserted, but without obtaining any pus.

During the second week the patient emaciated rapidly; the fever persisted until May the 8th, and then fell to normal, the range being between 97° and 99° . The spleen remained large; there were definite sweats, but he seemed altogether better. On the 9th the blood count showed a diminution in the number of leucocytes—13,000 per c.cm. The temperature remained low, and patient seemed to be somewhat better until the 15th, when it rose to nearly 105° , and the pain in the side had been worse ever since he sat up with the bed-rest two days ago. Yesterday it became very intense. The physical signs have scarcely changed. There is still flatness from the fourth rib, and behind from just below the angle of the scapula. The apex-beat of the heart can now be accurately localized, and is in the fourth interspace 1.5 cm. outside the nipple. The respiratory sounds are feeble and distant.

On the 16th the patient was again aspirated, and this time pus was found which was a little stained, and contained the staphylococci and micrococcus tetragenus. Shortly after the aspiration the patient was seized with a fit of coughing and began to expectorate a quantity of reddish-brown, anchovy-sauce-like sputa, which was examined for ameba, without finding any. It was then determined to transfer to the surgical side for operation. Before the transfer the following careful note was made: "The patient is propped up in bed; the right side of the chest seems a trifle fuller than the left, the upper part looking more nearly equal. Motion is defective in the lower right front. On the right side flatness begins in the upper sternal line in the third space, at the upper border of the fourth in the nipple line, and at the fourth space in the mid-axillary line. Posteriorly, flatness begins at the angle of the scapula. In the erect posture the upper limit of dullness in front appears to move slightly. On the right side the percussion is clear. Respirations are clear at the apex in front, but diminish greatly in intensity over the flat areas, and is of a distant tubular character. The voice sounds have a somewhat nasal quality. The vocal fremitus is only just perceptible. In the infra-scapular

regions the inspiration has a more distinctly tubular character, and there is very distinct egophony. The liver does not appear enlarged downward, and the border is not palpable."

The case was thought to be probably empyema, though the possibility of an hepatic or sub-phrenic abscess had been considered.

The following is an abstract of the report on the operation by Dr. Halsted :

The eighth rib on the right side was exposed by an incision from the axillary line to the nipple line ; a portion of the rib, 5 cm. in length, was excised. It was found that the costal and diaphragmatic pleural surfaces were adherent. An incision made through these and the diaphragm opened at once into a large sub-phrenic abscess, which was freely evacuated and packed with iodoform gauze. The patient reacted well from the operation, and made practically an uneventful recovery. The discharge of pus gradually diminished, and he had fever only on two days. He had a chill on the 30th of May, and on the 3rd of June, after which he had no further fever. His weight rose from 129 to 156 pounds, and he was discharged August 15th with only a small sinus remaining.

CASE V. *Acute rheumatism ; during convalescence signs of large empyema ; operation ; 100 c.c. clear serum in pleura ; evacuation of large sub phrenic abscess ; recovery.* Thomas F.M., æt. 14, schoolboy, admitted August 3rd, 1892, complaining of pain in the shoulders and in the stomach. His family history is good. He has had measles once, and diphtheria twice, but has been, until quite lately, healthy and strong. The present illness began three months ago with pain and swelling, at first in the ankles and knees, and subsequently in the hips and other joints. Evidently, from his account, he had a pretty sharp and somewhat protracted attack of acute rheumatism. He had been convalescent and doing very well until two weeks ago, when he had pain in the right side, cough, and slight expectoration. For at least two weeks he has had some shortness of breath, which lately has increased very much. He has had no diarrhea ; the bowels have been regular, the appetite fair. He has had chilly feelings, but no definite rigors ; has at times been feverish, and has sweated freely at night. He states that he has lost about twenty-five pounds since the beginning of his illness.

On admission the patient was emaciated, pale, propped up in bed, the pulse 124, regular ; the temperature, 100°, rose within a few hours to 103°. The respirations were 28.

Thorax. Prominent on the right side, which does not move nearly so much as the left, and there is distinct bulging in the fourth and fifth right spaces under the nipple.

Percussion on the right side gives a somewhat tympanitic resonance in

the infra-clavicular space, gradually shading into flatness at the fourth rib, the line of dullness extending through the lower axillary region to a point just above the angle of the scapula. In the erect posture the line of absolute flatness in front is distinctly higher. Tactile fremitus is absent in the flat regions. The respiratory sounds are everywhere clear except at these parts, where the respiratory murmur is scarcely audible. On the left side the physical examination is negative.

There is no expectoration. The apex-beat is under the fifth rib in nipple line. The first sound is loud and sharp, and the second sound at the margin of the sternum was louder than the left. On palpation there was a suggestion of a thrill at the apex region, and there was a slight echo in diastole, but no definite murmur. The abdomen presents nothing special on inspection: the liver dullness extends three fingers' breadth below the costal margin. The border is not accurately palpable, owing to the contraction of the abdominal muscles. The edge of the spleen is not palpable. The patient remained in the medical wards for five days. The temperature range was from 98° to 103.5°. He had no chills, some sweating; the pulse ranged from 110 to 130. On the 7th, pus was drawn off with an aspirating needle, and the patient was transferred to the surgical side with the diagnosis of empyema. The pus was creamy-looking, but no micro-organisms were found.

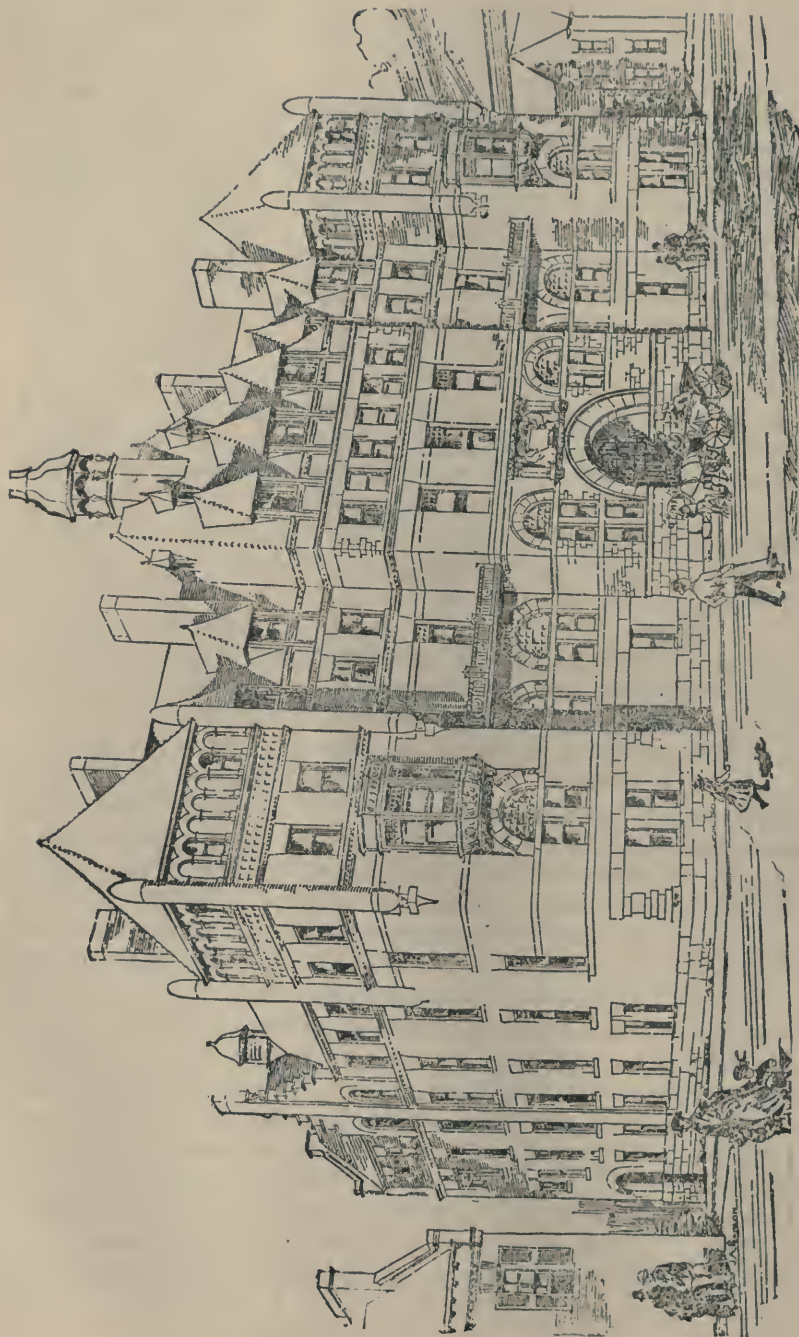
An operation was performed by Dr. Finney on August 11th. About 9 cm. of the ninth rib on the right side was excised. An aspirator needle was then passed through the thickened pleura, but seemed to enter a solid mass, and nothing was obtained. On a second attempt, 250 c.c. of pus were withdrawn. The pleura was then incised just above the diaphragm. No pus was found, but 100 c.c. of clear serum. The diaphragm presented at the wound. The pleural cavity was shut off as completely as possible with strips of gauze, and the diaphragm was incised with the Paquelin knife, opening into a large pus cavity with numerous pockets. About 100 c.c. of pus were evacuated. A rubber drainage tube was inserted into the cavity. The patient did remarkably well, and the temperature fell. He was dressed daily; the discharge was free, and he gained in weight, and left the hospital on September 9th, still with a slight sinus.

VICTORIA HOSPITAL FOR SICK CHILDREN,
TORONTO.

Hospitals are at all times objects of interest to medical men ; so that one may almost take for granted that a brief description and narration of the circumstances surrounding the origin and growth of one of the largest institutions of that kind in the city may be read with pleasure. While this general interest may be presumed, there are many readers of *THE PRACTITIONER* who are interested in a somewhat especial manner in the history of the Victoria Hospital, since but recently, as members of the Ontario Medical Association, they had an opportunity of inspecting the building and equipment ; and at the same time of accepting the hospitality of the trustees. Then, too, in this age of hospitals and magnificent charities, there is a constant increase in the number of these institutions, and many men are actively engaged in their establishment, equipment, and management ; so that the relation of difficulties and successes of a kindred institution from its inception in a most humble way, twenty years ago, to the position which it now holds as the best equipped children's hospital on the American continent to those so engaged may be profitable, and at the same time give encouragement.

The character of the hospital, its devotion solely to children's diseases—a comparatively recent departure in hospital work—must appeal to those who appreciate and are endeavoring to lessen, in some way, the appalling mortality among young children.

The Victoria Hospital, as it stands to-day, is a monument to the long-continued perseverance and earnest effort of those who were and are connected with it. The present splendid building is the fourth in the history of the institution. At its foundation—in 1875—a small dwelling of eleven rooms on Queen street was utilized, but the number of patients soon made it necessary to secure more accommodation, and in 1876 a larger building on Seaton street was secured. This, in turn, soon became insufficient to accommodate the number of children admitted, and for the second time a move became necessary, and in 1878 a building somewhat larger than the one vacated was secured on the site of the present hospital on College street. However, the new quarters, while larger, were of such poor construction that it was impossible to make repairs, and the management determined upon the erection, at an early date, of a building in every way suitable for the purpose intended. In the meantime the temporary shelter was secured, and in 1886 the hospital became located on Jarvis street, where the work was carried on until the completion of the present structure in 1891. During these years there had been a constant increase in the number of patients ; and despite the hampering conditions, both in the



VICTORIA HOSPITAL FOR SICK CHILDREN.

way of insufficient accommodation and scanty supply of money, an immense amount of good work was accomplished.

A lot of 150 feet frontage on College street, extending between Elizabeth street and Mission avenue, having been secured, the foundation stone of the new hospital was laid, and two years after the magnificent building was completed, thoroughly equipped and furnished from basement to garret. In the construction no expense was spared, everything was of the best, both of material and workmanship, and every device and appliance which would add to the efficiency of the hospital service was secured. Indeed, so anxious were the management that everything should be fully abreast with the most recent advances in the art of hospital building that

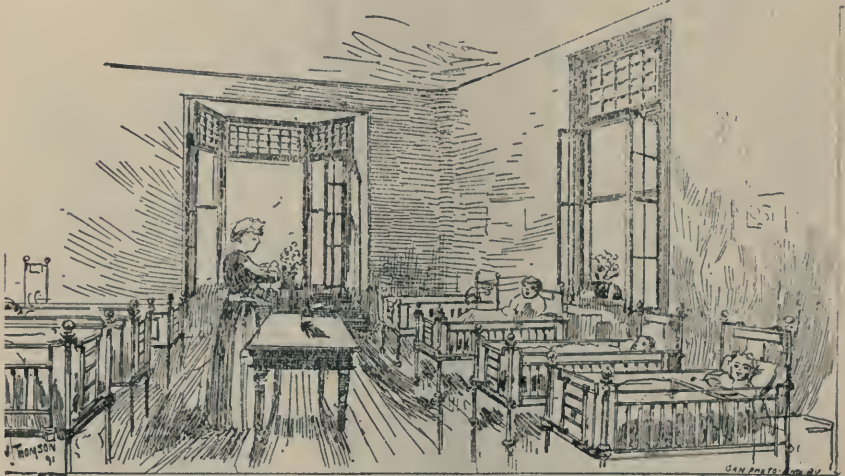


BOARD ROOM.

the indefatigable chairman of the board, Mr. J. Ross Robertson, visited and examined every children's hospital in the world, with the solitary exception of one at Buda-Pesth. Small wonder, then, that the hospital, as it stands to-day, is a model one, and illustrates to the fullest degree in its appointments and furnishings the most advanced ideas in hospital building.

The hospital occupies the entire lot, having 150 feet frontage, and being 105 feet deep. * It consists of a centre pavilion, two flanking towers, and two intermediate sections. The style of architecture is of the Romanesque

with a suggestion of the French château. The walls are of dark, hard-burned brick, relieved by a large quantity of cut-stone trimming. The centre pavilion and the two towers at the angles are roofed with Spanish tile. The color, being a dull red, warm in tone, gives an impression of rest and comfort. The letter "E" conveys a fairly accurate idea of the outline of the hospital. In the wings are situated the large wards, three in each wing, while smaller wards occupy the front corners of the building. The small central portion of the letter would indicate the position, in the basement, of the laundry, drying room, etc., and, above, the lecture room and operating theatre, with its adjacent instruments, anesthetic, photographic, general appliances, and wash rooms. In the



J. ROSS ROBERTSON WARD.

centre, corresponding with the front line of the letter, are, below, the entrance and stairway, offices, cloak rooms, and elevator; while above are two large wards.

A portion of the third story is reserved for the nurses' bedrooms, and parlor. In the attic are the servants' quarters.

The general plan of the wards is the same throughout. The large wards in the wings, of which there are five, contain twenty beds, are lofty, and exceptionally well lighted. Adjoining the wards are the bath room and dressing room. These rooms are situated at opposite ends of the ward, which is a great improvement, and is found more convenient; while the dressing room, quite apart from the ward, frees the other occupants from the distressing surroundings of a minor operation or dressing. Each ward contains a fireplace for ventilating purposes. The six



LAKESIDE HOME.

corner wards contain eight beds each. On each flat, between the large ward in the wing and the small corner ward, is the nurses' pantry, linen closet, and clothes shelves.

The basement beneath the main building contains a well-arranged outpatient department, dispensary, schoolroom, linen room, nurses' and servants' dining rooms, and a model kitchen. Beneath the operating theatre is a complete laundry, furnished with power by an electro-motor, and complete in every particular, with its rotatory wringer, drying room, mangles, and disinfecting apparatus. Beneath the basement proper are the engine rooms and ventilation apparatus, with a perfect labyrinth of pipes running to all parts. There is also the pumping plant necessary to run the elevators, of which there are three in the building.

For the accommodation of cases of infectious diseases occurring in the wards, the third flat in the west wing has been completely isolated from the rest of the hospital, having a separate elevator with outside entrance, and also separate kitchen and other accommodation. This wing is divided into a number of small wards, and will contain eighteen beds. The hospital has one hundred and sixty beds in all.

In the way of special features, the internal telephone system, by which the general office is connected with every part of the building, has been found very convenient. The operating room is large and well lighted, and has seating sufficient for sixty students. The furnishings are complete in every detail. The hospital management, fully recognizing the facility for the extension of their work through education in diseases of children, have given every opportunity to medical students. The fee fixed is a nominal one only. Clinical lectures are given daily in the operating theatre and in the wards. The trustees are anxious not only to benefit the children of Toronto, but to have in their hospital a centre of education in Diseases of Children, so that in course of time, as succeeding classes go out to practise, the influence of the Victoria Hospital will be felt in the lives and happiness of children in every quarter of this Dominion. Their efforts in this direction are not confined to medical students only, for in connection with the hospital there is a training school for nurses.

Under the same management, and forming a part of the hospital, is the Lakeside Home, situated on the island, off from the city, and distant about two miles. In the summer months all patients, except acute cases requiring constant medical care, are taken to the Home, where, in addition to medicine and nursing, they can have the benefit of the refreshing breezes from the lake.

The rules regarding the admission of patients are: The children must be between the ages of two and fourteen. The regular rate in the public wards is \$2.80 per week. In the case of those who are too poor to pay

this amount, they are allowed to pay what they may feel able towards the support of the child, and, if this cannot be done, the patient is taken in without fee of any kind. There are private and semi-private wards for the children of well-to-do parents, and in the case of private ward patients the physician or surgeon is paid his regular fee. The entire cost of the Hospital proper is, roughly, \$120,000; of the Lakeside Home, \$30,000. The institution depends largely upon the support of its friends. From time to time bequests and donations are received, and as the nature of the work becomes more widely known no doubt the number of these will rapidly increase. As an instance of the loyal support given to the hospital by its friends, one might mention, first, the princely gifts of the chairman of the board, Mr. J. Ross Robertson, who has contributed to the Victoria Hospital and Lakeside Home, in all, \$40,000. Messrs. E. B. Osler, George A. Cox, and A. M. Smith, the trustees, have given respectively \$3,000, \$1,000, and \$1,000. The city, in the Jubilee year, made a grant of \$20,000. There is also the Tucker bequest of \$20,000, not yet received, and the Stewart bequest of \$8,000.

(TRANSLATION.)

CHOLERA AT THE COCHIN HOSPITAL.

(Under the supervision of Dujardin-Beaumetz.)

By J. SOTTAS AND PATAY.

Translated by

DR. J. A. AMYOT, TORONTO.

FROM July 12th to October 30th, 1892, forty-six patients suffering from symptoms of a choleric form nature were treated under Dujardin-Beaumetz in the Cochin Hospital.

The symptoms varied in intensity in the different patients, and according to the gravity of these symptoms the cases have been divided into three groups: Twenty-two are placed in that group in which there were only slight general disturbances, slight algidity, diarrhea that was not very characteristic, vomiting, and slight cramps. Of these, fifteen were males and seven females.

It is a question whether or not these were merely choleric form cases or mild cases of true cholera.

The remaining twenty-four, with anuria, rice-water stools, grave general symptoms, and the comma bacillus present in the stools of all those cases examined by Dr. Netter, were characteristic ones of cholera. The second and third groups may be taken from these twenty-four; according to the severity of the symptoms, twelve would then be placed in the second or

milder form group ; of these, seven were females and five males. The third, and most virulent group, will take in the remaining twelve ; of these, seven were women and five men ; ten of these died, five males and five females. Out of the twenty-four classic cases there were then ten deaths, or forty-one per cent.

No new points as to etiology were made out.

The ages of the cases ranged from fifteen to sixty years. Nearly all came from the southern suburbs of Paris.

The greater number were in bad condition from want and exposure, from alcohol, and from lack of hygienic precautions. One, for instance, had admitted drinking habitually from a ditch.

Three of those patients that died had nursed or had lived with patients that had died of cholera. One of those that died had been treated at L'Hôtel Dieu three weeks previously for a first attack of cholera.

The following are the symptoms observed in those cases considered cholera without doubt :

Diarrhea set in generally with epigastric pain. The first stools were fluid and profuse, bile-stained and oily. It appeared that when this diarrhea could be stopped, and this particularly in the less severe cases, the progress of the case was arrested for a time at least, and sometimes cure followed promptly. The diarrhea of the first few days may be considered as premonitory only. When it persisted, it soon became characteristically rice-watery.

Vomiting was present in nearly all the cases, even in the milder ones. In the more severe forms it was uncontrollable, and was accompanied with most severe gastric pain. The vomit in most cases was clear and aqueous, sometimes mixed with small green or, again, whitish gray particles.

Cramps were present from the very beginning. They were of all degrees of intensity, from the mere dull, heavy pain, which did not persist and could easily be borne, to the most excruciating and intolerable, continuous cramps that tortured without relaxation, extending even to the extremities—the whole body, in fact—but localized chiefly in the epigastrium.

The weakness of the pulse was naturally proportional to the severity of the attack ; sometimes could not be felt at all ; even a day or two before death the heart sounds could, in some cases, only be heard with difficulty, especially when the peripheral circulation seemed to have come to a stand-still altogether. The wound necessary to expose a vein to be opened for intravenous injection of artificial serum could be made without even the effusion of blood. When convalescence set in, the pulse gradually became stronger ; but only regained its former strength after a long time.

In all the cases the temperature was subnormal—35° and 37° C. in the

less severe, and even to 34° , 33° , and 32° C. in the very severe ones. In no case during the period of reaction was the temperature seen to rise excessively. In one case, where the attack had been severe, with sub-normal temperature, anuria and coma, convalescence was established without rise of temperature above normal. It returned to the normal by lysis, if the term might be so used.

Anuria was a constant symptom in all the cases. The return of urinary excretion was always a favorable sign. Tube-casts were found in the first urine. Histological changes corresponding to this condition were found in the kidneys of the two cases examined.

General symptoms. The patients became rapidly depressed. They are completely prostrated, sluggish, remaining indifferently in one position, or complaining of their horrible sufferings, of a sensation of oppression, a weight on the chest, and insufferable agony. In contrast to the excessive pains, the sensibility to external objects is quite dull, they scarcely taking notice of what would cause severe pain in a healthy individual.

The expression is that of fear, the eyes are sunken and circled with black, the features are pinched, the lips are dry, the tongue is coated, the gums and teeth covered with sordes.

The voice is cracked, and finally disappears; sight is dimmed. There is no true delirium, but a progressive dulling of perception and mentation.

The extremities are cold and soon become as if mummified; the skin of hand remains wrinkled for quite a time if pinched up. The whole body becomes mottled over with bluish spots.

Whether this torpid state has been preceded by a period of excitement, brought on by the excessive pains, or whether it has come on gradually, the patient soon becomes comatose, and is insensible even to the incising of the skin necessary to expose the veins for intravenous transfusion; he dies without agony.

Two of the women who died were pregnant. The authors have pointed out the unfavorable influence of this state in an attack of cholera. We give here the observations made on these two cases.

CASE I. Martha G., æt. 43, pregnant six and a half months, has suffered from phlebitis of left leg for one month, entered the isolation pavilion in charge of Dujardin-Beaumetz on September 4th, suffering from an intense diarrhea, with vomiting and cramps.

During a couple of days the patient improved, and appeared as though going to recover; fetal heart sounds could be heard, but patient was still very feeble. A recrudescence, anuria, and extreme feebleness accompanying it, soon came on.

On September 9th, at 2 p.m., there was done a transfusion of Hayem's artificial serum.

Sterilized distilled water 1000 grams.

Sodium chloride..... 5 "

Sodium sulphate..... 10 "

The median-cephalic vein of right arm was exposed ; the patient, absolutely exhausted, made no movement. The axillary temperature was 33.5° C.

Two litres were injected in twenty minutes by means of a Collen's apparatus.

During the operation the pulse reappeared, the patient seemed to recover, the conjunctiva became moist, the patient even spoke, and seemed really to be coming to life. This has been the experience of all. It is well known, though, of what short duration is the resurrection. Two hours after the operation the temperature had gone up to 34.5° C., and remained there for that night and the following morning; but the anuria persisted, coma reappeared. Again an injection of a litre of fluid was tried at 1 p.m. Again this injection, given *in extremis*, improved the pulse. The patient then, without showing any signs of pain, gave birth to a seven months female fetus at 4 p.m., and died herself at 9 p.m. on September 10th.

CASE 2. Rosina G., confectioner, æt. 36, entered on October 11th with classical symptoms. She had been ill three days, and showed on entrance a good deal of agitation, and was suffering severe pain. There was complete anuria. She was pregnant eight months. There could not be made out any fetal sounds, the fetus probably being dead.

On October 13th, at 2 p.m., she gave birth to a dead child. Labor normal, but rapid. No hemorrhage.

Immediately following delivery was an amelioration of symptoms, the temperature rose slightly, and some urine was passed.

She went on this way for a couple of days ; then the symptoms became more grave, anuria again came on, the extremities became cold, the body became covered with violet spots, the tongue blackened, followed by coma and death on the 17th.

The other three women who died were only a short time in the hospital.

CASE 3. Female, æt. 36, died in eight hours.

CASE 4. Female, æt. 62, died in twenty hours.

CASE 5. Female, æt. 46, died in forty-eight hours.

The other five deceased were males, as follows :

CASE 6. Male, painter, æt. 19, relapse. Had been in L'Hôtel Dieu three weeks previously ; died immediately on entering.

CASE 7. Painter, æt. 46, died in twenty-four hours.

CASE 8. Blacksmith, æt. 44, died in four days.

CASE 9. Laborer, æt. 42, died in five days.

CASE 10. Plumber, æt. 46, died in forty-eight hours.

At the autopsies of the preceding subjects, the macroscopic lesions were not very noteworthy. Cadaveric rigidity was extreme, and had come on immediately after death.

The lungs were in all cases congested. In two cases there was pleural effusion. The blood was thick and viscous, and flowed quite slowly on the autopsy table, almost like oil.

The liver showed superficial yellowish spots. The gall bladder in all cases was distended with a quantity of greenish bile.

The intestines did not show, in all cases, that classical rosy tint, but were congested. The vessels were engorged; the intestine appeared as though desquamated, and was covered with riziform débris; Peyer's patches were swollen and surrounded by a congested line.

We did not find marked exfoliation in all the cases, and in two there was none at all; there was none, either, in the fetal intestines. We found it once in the large intestine. The spleen was soft, and only slightly enlarged.

The kidneys were engorged and enlarged even after washing; the cortical substance was yellowish. We examined, microscopically, the kidneys and livers of the two pregnant women, and made out the following points. The pieces were put in hardening fluid four hours after death.

Kidneys, Malpighian bodies. The vascular tufts were engorged with blood, and slightly infiltrated with leucocytes; the tuft fills nearly the whole of the glomerular cavity, with the exception of a little crescent-shaped portion at the pole opposite to the vascular entrance; this portion is filled with refracting albuminous masses, epithelial cells from the vascular tufts, and with leucocytes and red blood cells.

Convolutated tubules were dilated; the epithelial cells that are normally cylindro-conic had become cubical; the portion of the cell towards the lumen was detached from the rest of the cell. In those cells that had remained intact, small characteristic hyaline bodies were found. A number of the granules in the cells were blackened by osmic acid. Some of the granules had coalesced into quite large globules, which could be distinguished from the hyaline ones by being blackened by the osmic acid. The islands of degeneration are distributed unequally throughout the kidney. The lumina of the convoluted tubules and those of Henle's loops were filled with material in major part composed of hyaline masses, oil globules and granules, and a few leucocytes and red blood corpuscles.

The collecting tubules were filled with hyaline and granular casts.

In fact, there was an acute glomerulo-nephritis, with a certain amount of degeneration. The kidney was as if injected by the exudate, and thus is explained the anuria and the great number of casts found in the first urines.

There was no well-marked lesion in the liver. There was fatty degeneration in those hepatic cells bordering the portal spaces. The island of degeneration surrounds the space, and prolongs itself to join similar islands, and thus the lobules are surrounded by a zone of degeneration.

TREATMENT. On entering the hospital, the patients (they generally were in the algid state) were enveloped in a woollen blanket and surrounded by warm water bottles. They were also rubbed well with warm, rough, dry towels, and besides this they were given three tablespoonfuls of the following mixture every quarter of an hour :

Lactic acid	10 grams.
Simple Syrup	20 "
Essence of Lemon..	2 "
Water.	1000 "

To stop the vomiting, ice in small pieces, or ice-cold milk, or some aerated fluids. Twenty minims of paragoric elixir was given every hour.

Laussedat's drops were often successfully used for the vomiting. The following is the formula ·

Ethereal Tr. of Valerian,	5 grams.
Tr. Opii.....	1 gram.
Essence Peppermint....	5 drops.
Hoffman's Anodyne....	5 grams.

Twenty-five drops of this mixture is given each time that the patient has an inclination to vomit or for the bowels to move.

Massage and hypodermics of morphia are used to relieve the cramps ; and caffeine and ether injections for the algidity and weakness.

Transfusion of artificial serum was done but twice on the same patient, and then under the circumstances mentioned above.

Following the advice of M. Bourey, flushing out the intestines was done several times with good results ; this procedure rid the intestines of considerable quantities of riziform materials.

The operation is done by means of an esophagean tube pushed up as far as possible, and by this means throwing in about three litres of a naphtholated solution, 20 centigrams to the 1,000. Of the different remedies used in the treatment of cholera, some are simply for the treatment of symptoms: vomiting, diarrhea, cramps, etc. ; others have for object the destruction of the germs causing the affection, and, again, the neutralizing of the toxines, and this constitutes rational medication ; such is the use of lactic acid, for example, and such, again, the use of antiseptics by the gastro-intestinal tract. Other medications combine both at a time, the symptomatic and the rational, such, for example, as washing the stomach and intestine, which methods diminish the vomiting and the

diarrhea, and saves the economy from absorbing the deleterious toxines.

Subcutaneous and intravenous injections of artificial serum and of saline water give to the economy that water which has been taken from it by the continued dejections ; they dilute, and at the same time render the blood less toxic ; they play the part of nerve excitants and heart stimulants, bringing back the circulation to its normal. This transfusion can be compared in effect with bleeding in uremia, depleting the blood in part of its toxic principles ; also to the transfusion of alkaline fluids in the coma of diabetes.

But in none of the cases can the method be curative. It simply wards off the immediate danger, and aids the organism in the struggle, but does not act directly on the morbid principle.

In the first stages of cholera the treatment would be symptomatic. The majority of authorities contend that if we could check the premonitory diarrhea, the progress of the disease would be stopped in many cases.

To combat the diarrhea and bring on the elimination of toxines, Professor Peter gives at the very start out a mild purgative, followed by some opium preparation.

Professor Hayem advises lactic acid from the beginning. He claims very good results in those cases that have not started too suddenly, and in which the algidity is not marked.

M. Lauenstein, of Hamburg, obtained no good results from the employment of lactic acid. Salol, resorcin, naphthol, and benzo-naphthol have all been used with a view to their antiseptic properties, but with very little success.

Selected Articles.

DIFFUSE TUBERCULAR HEPATITIS WITH TUBERCULAR PERICARDITIS*

BY ALEXANDER MCPHEDRAN, M.B.,

Associate Professor of Medicine and Clinical Medicine, University of Toronto,

AND

JOHN CAVEN, M.D., L.R.C.P. LOND.,

Professor of Pathology, University of Toronto.

THE following case is worthy of being placed on record, both on account of the rarity of the disease and the unusual character of the symptoms.

Ellen S., aged twenty-eight years, married, husband and one child dead of tuberculosis, four children living and healthy, family history unimportant. Since her husband's death, two years ago, she has been in domestic service. She enjoyed good health until early in December, 1891, when she began to feel epigastric distress after eating, and a short time later vomited almost as soon as food was taken. The vomited matter became increasingly bile-stained, whilst strength failed and thirst was prominent. About January 1st, 1892, she noticed a jaundiced hue, which soon became quite marked. The bowels had become loose in December, and now a troublesome diarrhea set in. She frequently had chilly sensations, but no rigors, and was confined to bed during most of January.

When admitted to Toronto General Hospital on January 27th, 1892, she was considerably emaciated, and her face had an anxious, pained expression. The conjunctivæ and body surface generally were deeply jaundiced, and the skin moist. Her temperature was 99.5° F.; pulse 108-120 beats to the minute. Distress was still felt in the epigastrium, and also in the right hypochondrium, but there had been no vomiting for two weeks. The bowels were constipated and stools clay-colored.

Inspection showed the abdomen to be decidedly full in its upper part, and the lower border of the liver was easily traced across a level three-quarters of an inch above the umbilicus; it was even and somewhat

*Read at the meeting of the Canadian Medical Association, Ottawa, September, 1892.

rounded, the surface of the organ being smooth and tender. In the left side the hepatic dullness was continuous with that of the spleen, the lower end of which extended one inch below the border of the ribs. There was considerable tenderness over all the liver and spleen, and continuous pain in these regions was complained of.

There were signs of pleural effusion in the right side, dullness extending as far forward as the mammary line, and as high as the fourth rib in that line and the fifth dorsal vertebra behind. Over this area respiratory sounds were audible, but weak, and occasional friction sounds were present with both inspiration and expiration.

The apex beat of the heart was displaced a little outward and was somewhat diffuse, a high-pitched systolic sound, probably pericardial, being heard over the fourth and fifth costal cartilages to the left of the sternum, almost disappearing with inspiration.

The urine, specific gravity 1015, contained much bile pigment, but no albumin. No signs of disease could be found in the lungs, nor in the abdomen or pelvis, except those already spoken of.

February 8th. Signs of pleurisy in left side.

13th. Pericardial friction, fremitus felt in the third intercostal space; auscultatory signs very distinct. A week later the whole pericardium became affected, with considerable effusion, precordial dullness extending to the third intercostal space.

20th. Some coarse liquid crepitation present in lower parts of both lungs; this was found to vary in abundance from day to day. There was slight cough, with occasionally some thick, dark sputum, mostly blood. The sputum disappeared entirely after a few days, and the cough subsequently abated so much as to give scarcely any trouble. Jaundice had begun to lessen perceptibly.

March 1st. The pericardial effusion had begun to absorb; the right pleura showed no change, but the effusion in the left had gradually increased. The abdomen was extremely tender and diarrhea troublesome, the stools being liquid and offensive. Some effusion into the peritoneal cavity was noted. The urine was less pigmented than at first, and contained a small quantity of albumin. Microscopic examination discovered the presence of pus corpuscles and crystals of tyrosin. The crystals were small, abundant (four or five in a field), and always adherent to pus corpuscles. The size of liver and spleen remained unaltered.

7th. Diarrhea had become profuse and bowel motions involuntary; patient appeared *in extremis*.

10th. The bowels now became constipated and patient began to improve.

20th. She was quite hopeful, and taking nourishment fairly. She slept better, had less pain, and the temperature was less disturbed, and finally sat up for an hour or two daily. This improvement lasted for only a few days, and then she grew rapidly worse again, the temperature varying from 96.5° to 103° F. There were profuse perspirations, but no chills. Jaundice was now completely replaced by a dusky livid hue. Fine liquid crepitation was heard in the lungs, more abundant and generally distributed than before. No signs of pericarditis were present, and no change was noticed in the condition of the right pleural cavity; the effusion in the left was increasing, however, as was that in the peritoneal cavity. The urine still contained tyrosin crystals, pus, and a small quantity of albumin.

The patient's condition continued much as above during April, her strength gradually failing, although she had sat at the window of the ward almost daily. The liver showed no change in its condition, but tyrosin crystals were not found in the urine after April 10th. Death took place April 28th.

Report of *post-mortem* examination—made at Toronto General Hospital, April 29th, 1892 :

Inspection shows the body of a woman of apparently forty years of age; emaciation extreme; skin dark and somewhat yellowish in color, black hair on chin and abdomen; *rigor mortis* and *post-mortem* staining poor; bedsores over sacrum.

Section shows subcutaneous fat almost none; muscles thin and black; omental fat much wasted; three pints of bright yellow slightly fibrinous fluid in abdomen.

Pleuræ. Diffuse adhesions on both sides; loculi containing fluid, formed by adhesions also on both sides; loculus on left side large, reaching from second rib to base and limited by nipple line in front; both pleuræ greatly thickened by layers of plastic lymph, only that immediately next the serous membrane being replaced by fibrous tissue; the adhesions appear old and are about one-half inch in thickness, but break down readily, being nearly pure fibrin. The pleuræ are found, when stripped, studded with miliary tubercles. The inflammatory process has spread from right side into the anterior mediastinum, and plastic material is thickly deposited on right half of inner surface of sternum.

Pericardium. Complete fibrinous adhesion exists between the parietal and visceral layers; thick, but readily broken down, except over the surface of the right ventricle, where, on a spot the size of a 25-cent piece, it is firm and fibrous. The lungs overlap the pericardial sac, almost hiding it, and are glued to it by fibrin.

Lungs. Miliary tubercles scattered through both, by far most densely in and just beneath the pleuræ; caseating glands at root of lungs; no consolidation; edema and hypostasis.

Abdomen. Perihepatitis and perisplenitis of some standing, and with adhesions similar to those found between the pleuræ, fixing the liver and spleen to diaphragm, and spleen to liver.

Spleen. Weight twenty-three ounces; diffuse perisplenitis, adhesions; reaches forward and to right till its border is attached closely to the left lobe of the liver by plastic lymph; miliary tubercles scattered widely through the organ and plainly visible beneath the capsule; consistency, firm; pulp, increased.

Kidneys. Taken out with difficulty on account of density of the perinephritic areolar tissue; capsules peel fairly readily; scars as from old infarcts; tubercles in both cortex and medulla, but not in large numbers.

Ureters and bladder. Healthy.

Uterus and ovaries. Healthy.

Suprarenal capsules. *Post-mortem* softening.

Appendix vermiformis. Four and one-half inches; healthy.

Intestines. Large and small intestines empty, thin, pale; nothing specially noticeable excepting adhesions (old) between the colon, omentum, and gall bladder.

Stomach. Shows catarrh.

Liver. Large, sixty-two ounces; smooth; cuts hard, as though circumscribed; of "nutmeg" appearance; miliary tubercles beneath capsule and throughout liver substance; gall bladder, ducts, and veins healthy.

Pancreas. Soft; *post-mortem* changes.

Head. Not opened.

Microscopic examination. Miliary tubercles are demonstrated in the lungs, pleuræ, pericardium, diaphragm, liver, spleen, and kidneys.

Liver. Sections of the liver show miliary tubercles, though not in large numbers, from one to three in a section being common. They are scattered widely through the substance of the liver, and tend to be intra, rather than interlobular. In addition to the tuberculosis there is a *diffuse* interstitial hepatitis, which is largely of the intercellular variety, and which is accompanied by little or no alteration of the capsule from within. The interlobular tissue is widely infiltrated with inflammatory cells, and the inflammatory process has spread into the lobules, causing an intralobular cell infiltration, in many places quite dense, and a considerable new formation of connective tissue along the lines of the capillaries. This process has extended in many instances through quite a fourth of the distance between periphery and centre of lobule. The capillaries are in parts apparently occluded by the new tissue formation, and numerous leucocytes are to be seen in some, occasionally completely plugging them. The liver cells have undergone marked changes. Fatty infiltration is prominent in parts, whilst cell atrophy is very conspicuous in the peripheral areas

of lobules, where the pressure of the new tissue and cell infiltration is felt. Deposits of brownish-yellow pigment, apparently bile pigment, are seen here and there in cells, but not in abundance. In very numerous spots a curious hyaline-looking necrosis of the liver cells has occurred. This is noticed both in single cells and in groups of cells, and presents an appearance as though the cell protoplasm had become coagulated and broken up into a large number of roundish particles, some larger than a red blood corpuscle, but many much smaller. These particles stain strongly with eosin. In most instances the remains of at least one nucleus are distinctly visible amongst the necrosed protoplasm. The nucleus may remain intact, showing large nucleoli, or may be split up into fragments. These necrosed cells are in some cases infiltrated with leucocytes. The nuclei persisting in the broken-up cells are mostly very large, and stain darkly and sharply with hematoxylin, and the necrosed cells are also increased in size. Their limits are very definite. Scattered throughout the liver are enlarged cells with gigantic nuclei, corresponding closely to those of the necrosed cells; these are probably going through previous degenerative stages. In some parts numerous small branching bile ducts are to be seen, such as are noticeable in so-called hypertrophic cirrhosis.

This woman presented a most rare and interesting pathological condition, the true nature of which could be only partly understood from the *post-mortem* examination. It was thought at first that we had to do with a case of pylephlebitis, with much more than the usual jaundice. There were serious difficulties to be explained, however, if this diagnosis were to be accepted—*e.g.*, the absence of a primary suppurating focus of ulceration in the pelvis, cecal region, or elsewhere; the absence of chills; the signs of perihepatitis and perisplenitis, together with the affection, one after another, of the several serous cavities, and the long duration of the case. Pyemia, probably more frequently than any other affection, gives rise to inflammation in such various parts, but its course is usually terminated much earlier. Bright's disease was excluded as a cause by the condition of the urine, heart, and circulation. That there was sepsis in the case was quite evident from the temperature chart, the sweats, the dusky discoloration of the skin, the tumefied spleen, etc.; the source and nature of the poison were not so readily to be gotten at. When several parts are simultaneously the seat of inflammatory lesions, our minds naturally turn to tubercle as a possible cause; but it seemed just as difficult to explain many of the observed phenomena, especially those pointing to the liver, if this etiology were accepted, as with any other. Few pathologists refer at all to tubercle as a cause of diffuse hepatitis, and those who make reference to it say that it gives rise to no symptoms. Ziegler describes one form of tuberculous liver as exhibiting a general connective-

tissue hyperplasia, the parenchyma being traversed by bands of fibrous tissue, in which are lodged gray or yellow tubercles (*Path. Anat.*, 1890, Band ii., p. 599). Saundby, in 1890, said that he had seen two cases of tubercular cirrhosis in which there was a tubercular network surrounding the lobules, and in the lobules a remarkable development of biliary canaliculi (*Brit. Med. Journ.*, 1890, vol. ii., p. 1459). Delafield and Prudden, speaking of tubercular hepatitis, say that it may be associated with cirrhosis (*Handbook of Path. Anat. and Hist.*, 1889). Coats, in his latest edition, makes no mention of the condition. Osler states that with eruption of miliary tubercles in the liver there may be a slight increase of connective tissue, which is, however, overshadowed by fatty change. "Practically," he says, "it is very rare, except in connection with chronic tuberculous peritonitis and perihepatitis, when the organ may be much deformed by a sclerosis involving the portal canals" (*Practice of Med.*). Pepper records a case following measles, in which jaundice was occasional; the liver was hobnailed. No history of syphilis could be obtained. Klein has described *acute* interstitial hepatitis as he found it in eight cases of scarlatina. R. P. Howard, of Montreal, in a paper on "Cirrhosis of Liver in Children," reports seven or eight out of sixty-three as being co-existent with tubercle.

Having been unable to find anything in the history of our case or in the *post-mortem* appearances, apart from the tuberculosis, that would account for the occurrence of an interstitial hepatitis, we are constrained to believe that it resulted from irritation caused by the specific poison of the tubercle germs circulating in the blood. It could not have been the result of irritation by the localized tubercular nodules, since these were too few in number and too widely separated to account for a general hepatitis. The condition of the stomach and intestines was not such as to lead one to suppose that any fault in them was the cause. The points in the microscopic appearances which seem to add special strength to the view taken are (1) diffuseness of the process; (2) large amount of cell infiltration present; (3) necrotic condition of liver cells.

With regard to the first point nothing need be said, but of the second we may remark that such an inflammatory process is what one might expect where the poisoning was as acute as in this case. The comparatively small development of fibrous tissue is not what one would naturally look for were the process caused by prolonged absorption of irritative matters from the digestive tract, or by retention of bile by obstruction. Alcoholism was excluded from the history of the case, and the liver had none of the characteristics of an atrophic cirrhosis; the deposit of bile pigment was extremely small and confined to a few cells, none of the bile capillaries being plugged and dilated with it, as so commonly seen in

obstructive cirrhosis. A catarrh spreading from the duodenum might, of course, account for the passing jaundice, but not for the persisting hepatitis. The presence, moreover, of necrosed liver cells points rather to a toxine effect than otherwise. It has been shown that the toxalbumins of diphtheria and typhoid fever gave rise to such a necrosis as described (*Johns Hopkins Hospital Bulletin*, March, 1892; and Osler's *Practice of Med.*, art., "Typhoid Fever"). One of us has also observed a similar cell necrosis, with leucocytic infiltration, in a case of syphilitic cirrhosis.

The occurrence of tubercular pericarditis is worthy of note, since so few cases of this disease are on record. When she first came under observation there were signs of old pericarditis; these signs underwent no change, and at the autopsy they were found to be due to old adhesions. Later, signs of fresh inflammation developed over the base of the heart and gradually extended downward to the apex. The moderate effusion that resulted was fairly rapidly absorbed, and in five weeks after the first signs of pericardial disease showed themselves all traces of the attack had disappeared. The history of the pericarditis contained nothing distinctive in itself; its tuberculous nature could be surmised only from the associated conditions.—*The American Journal of the Medical Sciences*.

ON THE MEDICINAL EMPLOYMENT OF COFFEE.

I HAVE often been in the practice of prescribing coffee as a medicine in certain states of great debility. It appears to me to be a remedy quite unique in its usefulness in sustaining the nervous energy in certain cases. Apart from its general usefulness, I have found it of especial service after operations where anesthetics had been used, and in states of exhaustion where alcohol had been pushed and a condition of semi-coma followed. In these latter cases I have sometimes prescribed it as an enema when the patient could not swallow, and with the best effects. Its value as an antidote to opium is of course well known. Tea and coffee seem to me to be much alike in many respects, but I would give great preference to the latter as to its sustaining power. It would, I think, be a great advantage to our working classes, and a great help towards the further development of social sobriety, if coffee were to come into greatly increased use, and if the ability to make it well could be acquired. As an example of the difference of effect of tea and coffee upon the nerves, I may note, what I believe many sportsmen will confirm, that it is far better to drink coffee than tea when shooting. Tea, if taken strong or in any quantity, especially if the individual be not in very robust health, will induce a sort of nervousness which is very prejudicial to steady shooting. Under its influence you

are apt to shoot too quickly, whereas coffee steadies the hand and gives quiet nerves. My object in the present note is, however, to illustrate the remarkable power of coffee as a restorative medicine.

In the case of an old man in whom colotomy was done in a very desperate stage, he being almost moribund, good rallying took place under injections of coffee and milk. During the first two or three days great use was made of coffee, and I believe that the recovery that resulted was largely to be credited to it. I have employed it in many similar, though less severe, cases. It is my almost invariable prescription for elderly people after an operation for which an anesthetic has been given. One of the most remarkable facts, however, which I have ever witnessed, illustrating its powers, was the following: I was called late one evening to an elderly lady whom I had repeatedly seen previous on account of multiple sarcomatous growths in her bones. She had been in an almost dying state for more than a month, and at length it seemed that her end was come. I found her in a state of deep collapse, with pale face and dusky lips, and unable to speak or recognize any one. Her breathing was short and rapid. Her daughters were attempting to force brandy into her mouth by the spoon, but she could not swallow it, and I learnt that they had given a good deal of champagne and brandy during the afternoon. Her pulse, although very rapid, still beat well, and was not in keeping with her other symptoms of collapse. This made me think that probably more alcohol had been given than was useful, and I resisted the importunity of the relatives that subcutaneous injections of ether should be made. Feeling sure that she was sinking, and expecting that all would be over in an hour or two, I wished to take my leave. The patient's daughters, however, in great distress, begged me to stay to the end. I waited about an hour, still refusing to administer more alcohol. At the end of that time the nose had become cold, and the face was bedewed with a clammy sweat. It was under these circumstances that, in consequence of the urgent solicitations to do something, I thought of trying a coffee enema. After the nurse had prepared it, she appealed to me as to whether she should give it, evidently thinking, as I did, that it was absurd to attempt anything in a patient so nearly dead. It was, however, administered, and with the surprising effect that within a quarter of an hour the patient opened her eyes and recognized those about her. In another half-hour she spoke to us, and color began to return to her face. The coffee was repeated several times during the night, with the addition of some very small quantities of brandy. The result was that the patient recovered and lived on for three weeks afterwards.

In this instance I have no doubt that alcoholic stimulants, whilst they sustained the circulation, had acted injuriously on the nervous system,

and that the patient, already extremely weak, had been pushed into a condition approaching that of intoxication. It is, I believe, very easy on the deathbed to over-use alcohol, although in the case which I have narrated, the disease being incurable and the suffering great, the prolongation of life for a few weeks was not a matter of real importance. There are, however, many others in which death may be close at hand where an expedient such as that which I have described may be the means of permanent restoration to health.—*Hutchinson's Archives of Surgery.*

Clinical Notes.

A CASE OF ANEURISM OF THE ABDOMINAL AORTA— PROBABLE RECOVERY.*

BY A. MCPHEDRAN, M.B.,

Associate Professor of Medicine and Clinical Medicine, University of Toronto.

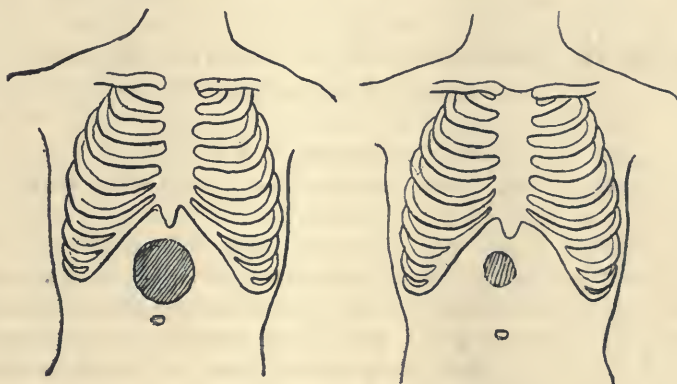
FRANCIS W. L., æt. 46, a plasterer. Had a slight attack of inflammatory rheumatism at the age of fifteen. Has been subject to slight attacks of lumbago for ten years. Between two and three years ago he began to be troubled with pain in the epigastrium—not constant—increased by work, so that coming home from work in the evening he walked somewhat stooped. Rest relieved the pain. It became constant, except when in bed, from September, 1891. In February, 1892, while leaning against a fence, he first noticed epigastric pulsation, and after that it was perceptible through his clothing.

On admission to the Toronto General Hospital in March, 1892, the following facts were noted: He is spare, anemic, poor musculature, apex beat of heart displaced half an inch to the left. A systolic murmur at apex, not traceable beyond anterior axillary line. In epigastrium opposite ninth costal cartilage there is a slightly elevated pulsating tumor, its centre being a little to the right of the middle line. The pulsation is expansile in all directions, and the tumor can be grasped on all sides, except the upper, which is overlapped by the liver. It is fixed, not affected by respiration, and pulsates in the knee-elbow position. Its surface is even and rounded. A faint bruit is audible over it; also very faintly in the upper lumbar region. Both sounds of the heart are distinct over the tumor. There is a perceptible interval between the radial and femoral pulses.

*Presented at the annual meeting of the Ontario Medical Association, June, 1893.

These signs, viz., a circumscribed pulsating tumor that could be grasped, the character of pulsation and its persistence in the knee-elbow position, the immobility of the tumor, the bruit, and the delayed femoral pulse, rendered the diagnosis quite certain.

On entering the hospital he was put to bed, and enjoined to maintain a state of as great quietude as possible, both physically and mentally. The amount of liquid per day was reduced to the smallest possible amount, about ten ounces, but he was encouraged to partake as freely of solid food as his powers of digestion could dispose of comfortably. These directions, I have reason to believe, were followed very conscientiously. This seems to me worthy of note, because, with scarcely an exception, patients of this class have proved quite unreliable. They would beg or



steal their neighbors' supplies if they could not get all they wished by more legitimate means. To further reduce arterial tension, and make it as low as possible, compatible with maintenance of circulation, nitro-glycerine was given, one minim, increased to two, being given four times a day. The radial pulse became barely perceptible, and remained so for several weeks. Potassium iodide was given in from five to ten grain doses, with a view to remove, as far as possible, the endarteritis affecting the vessels supplying the walls of the aneurism, and thus beget a better blood supply. This would lead to better nourishment of the walls and organization of inflammatory exudate; contraction of the walls would follow, and this, with deposit of fibrin on the inner surface, might lead to complete cure of the disease. With some the main object in administering the iodide is to lower arterial tension; but nitro-glycerine is a much more effective agent for that purpose.

The bowels were kept gently relaxed, so as to prevent all straining at stool; an enema or a mild laxative being given as needed.

The progress of the case was slow, but, on the whole, satisfactory until the following May, when his child died of diphtheria after a short illness. This caused so much mental disturbance, especially in his weakened condition, that the tumor, which had diminished materially in size, became enlarged to almost its former dimensions. This was probably due chiefly to the increased muscular tension resulting from the excitement, distending the walls of the aneurism, which had become partially collapsed rather than contracted. In two weeks he had regained what was lost, and he steadily improved from that time onward. The tumor became gradually smaller, and the pulsation less distinct. He became very anemic and considerably emaciated.

He was kept in bed until October; then he was allowed to sit up, and shortly to move quietly about. As such exertion had no apparent effect on the tumor, his liberties were gradually extended, and restrictions as to fluid and diet removed. In November he was allowed to return home. He was enjoined to exercise care as to quietude, and to avoid over-exertion. Light occupation was advised as preferable to idleness.

In December he felt himself driven by the needs of his family to resume his trade. He worked hard all winter, often doing heavy, straining work. This caused him no pain or discomfort, nor any change in the condition of the tumor. This spring, however, his general condition is not so good; he has considerable flatulent dyspepsia, and he is not so strong. The tumor seems a little larger, and the pulsation stronger; but the change is slight, and may possibly be due to lowered arterial tension. The pulsation in the tumor is now only slightly, if at all, expansile; it feels more like a solid mass attached to the aorta.

In the treatment of these cases, the greatest importance, of course, attaches to rest, mental and physical; it is essential in all cases. As to diet, cases vary. This man was decidedly anemic, and I deemed it advisable to improve the state of the blood by nourishing food, so as to supply good blood to the wall of the aneurism to improve its nutrition, and thus secure as much contraction as possible of whatever newly organized inflammatory exudate that might occur in it. As little liquid as he could do with was given, in order to reduce the volume of blood as much as possible, and thus reduce the tension of the sac. To further reduce arterial tension, nitro-glycerine and potassic iodide were given; of these I have no doubt that the nitro-glycerine was of much the most importance. The chief object in administering the iodide, as already stated, was to remove, as far as possible, the endarteritis affecting the nutrient vessels of the aneurismal sac, so as to improve its nutrition.

(These two figures will convey some idea of the size of the tumor and the area of pulsation on entering the hospital, March, 1892, and on presentation to the association, June, 1893.)

A CASE OF SYPHILIS WITH THE PRIMARY LESION
OCCURRING ON THE LOWER LIP.

BY F. N. G. STARR, M.B.,
Registrar, Toronto General Hospital.

THE following case may be of interest to some of your readers: The patient, a female, æt. 24 years, entered the General Hospital, under the care of Dr. McPhedran, in May, 1893. There was nothing important in the family history, nor in her previous personal history, except that about fourteen months before being admitted to hospital she had a "white swelling" in the right knee. In August, 1892, a tender lump appeared on the inner side of the lower lip, about its centre; a small spot in the middle of this swelling ulcerated, was painful, tender to the touch, and would not heal. This ulcerated nodule was burnt several times with caustic, and finally went away in a month or two. The point where this ulcerated spot formerly existed has continued to swell at times, and to be more or less painful; never but once, however, has the surface again become broken. Following closely upon the breaking down of this tender, indurated nodule, the mucous membrane of the mouth and throat became sore, and was more or less covered with white spots having red edges. The tongue, with the exception of one place at the side, escaped. Early in October she noticed some small red spots upon the skin of the face, close to the mouth; they next appeared upon the forehead. Other than this, she is positive there was never a rash on any other part of the body. Some time during December her hair commenced to fall out in great quantities; this, however, ceased some time ago, and the hair is now growing in. At the time of admission the cicatricial tissue on the lip, at the site of the former lesion, was apparent. Between the fingers the indurated mass could be felt to extend about half an inch from side to side, and about a quarter of an inch from before backward. The cervical glands were indurated; the epitrochlear on the right side was enlarged, hard, and tender; that on the left was feelable. There was some sternal tenderness. The rash at this time upon the face resembled an *acne vulgaris*, except that there was not the usual sluggish appearance to the surrounding skin. The forehead was more or less covered with pigmented spots where there had evidently been an eruption at some time. There was one marked pustule at the side of the nose. The patient was put upon iodide of potassium. In the course of two or three days the eruption upon the face commenced to fade, and at the end of two weeks, when the patient left the hospital, the rash had disappeared, there being nothing apparent but some pigmentation of the skin. During the winter previous to coming to the hospital

she had been through a course of treatment, which will probably account for the cessation of some of the symptoms, notably the falling out of the hair, and the healing of the mucous patches in the mouth. I was unable to discover how the disease had been contracted.

A CASE OF SCARLATINAL RECRUDESCENCE.

REPORTED BY F. MARTIN, M.D.,

Resident Physician to Victoria Hospital for Sick Children, Toronto.

(Under care of W.B. Thistle, M.D., in Victoria Hospital.)

ON May 27th, J.M., æt. 5 years, presented all the initial symptoms of an attack of scarlet fever. Her temperature suddenly rose to 101° . Had complete loss of appetite, with vomiting. On the following day the rash presented itself. It appeared first upon the neck and chest, and gradually spread and covered the whole body in twenty-four hours. Patient was transferred to the isolation ward, where the disease ran the course of a typical case of scarlet fever. Temperature gradually subsided, with daily remissions, as the rash disappeared, becoming normal on third day. Desquamation commenced about the usual time, but at no time was it very marked.

On July 3rd, while still isolated, the child became irritable, complained of headache, vomited, refused to take any nourishment; while the tongue presented the characteristic strawberry appearance. Temperature rose to 100° , with considerable angina present.

On the 4th a rash appeared, similar in every respect to that of the previous attack. To-day (the fifth day since the rash appeared) the temperature has reached normal line, and desquamation is commencing.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

EXPERIMENTAL RESEARCHES ON THE COMPARATIVE ABSORBING POWERS OF STOMACH AND RECTUM.

At a recent meeting of the Société de Thérapeutique, reported in the *Bulletin Général*, M. Main presented, on behalf of himself and M. Lemanski, the result of comparative investigations made, under M. Dujardin-Beaumetz, on the absorption of certain medicaments by the stomach and by the rectum. "One of us," he states, "being pressed for time, we instituted our experiments only with salicylate of sodium, salol, antipyrin, iodide of potassium, terebinthine, and methylene blue. After having determined the integrity of the gastric and renal functions of the subjects under observation, we first administered by the mouth a quantity of the medicament, the dose being adjusted with great precision. Two or three days after every trace of the medicament had disappeared from the urine, we placed in the rectum of the same subject a hollow Kügler suppository containing the same dose of the product."

Taken by the mouth, the salicylate of soda manifested itself in the urine at the end of thirty-five minutes; and at the end of twenty-five minutes when taken by the rectum.

We were enabled to determine the passage of antipyrin forty minutes after stomachal indigestion, and thirty minutes after rectal absorption.

We found iodide of potash in the saliva at the end of fifteen minutes, giving the medicament by the mouth; and at the end of ten minutes, giving it by the rectum. Here we must observe that the rectal administration of iodide of potash is extremely painful, and the subject of experiment is almost at once forced to expel the suppository. Accordingly, less than one gramme (the adopted dose) was absorbed by the rectum.

Methylene blue imparted a coloration to the urine within forty minutes after oral administration, and at the end of an hour and fifteen minutes when given per rectum.

Salol, taken by the stomach, manifested itself at the end of thirty minutes; taken by the rectum alone, after the lapse of four hours. This was to be anticipated, taking it for granted that the salol does not split up in the digestive tube, save under the alkaline influence of the pancreatic juice.

As for the terebinthine, it required forty-five minutes to communicate the odor of violets to the urine when administered by the stomach. Given by the rectum, it never gave evidence of its characteristic odor.

"One of us," adds M. Main, "had attempted some time previously the employment of suppositories of santal. This product was not absorbed, and produced only an intense rectitis."

From these experiments it follows that all substances may in general be administered by the rectum. Certain products, however, such as the terebinthine and the santal, would not be absorbed.

The speaker added that amongst the products directly soluble, which had been tested, the greater number pass into the circulation more quickly by the rectum than by the mouth. This is a new confirmation of the researches of Demarquay.

In the discussion which followed, M. Patein observed that salol decomposes, not only under the influence of the pancreatic juice, but also in the circulation.

M. Main: We simply wished to emphasize the fact that the decomposition of the salol in the rectum must proceed less rapidly, the secretions not being alkaline at the lower end of the digestive tube.

M. Catillon: This question of the alkalinity or acidity of the rectum has been controverted. In the course of investigations which I made at the laboratory of Vulpian on alimentation per rectum—investigations which have been here discussed and which have solved this question—I was led to look into this phenomenon, and very often I found an acid reaction in the rectum.

M. Constantin Paul: I believe the physiological rectum should be alkaline, but I have often determined its acidity in children suffering from green diarrhea.—*Medical Age*.

THE CURATIVE AND PREVENTIVE ACTION OF MERCURY AND IODIDE OF POTASSIUM.

Mauriac (*Journal de Médecine et de Chirurgie Pratique*, tome xlv., 64 année, 4 series) holds that the two drugs most powerful in the treatment of syphilis do not realize the conditions essential to entitle them to be named as specifics, though they are incontestably superior to all other remedies which have been employed against syphilis.

Their curative action is often wonderful, and can usually be implicitly relied upon when the drugs are given in accordance with the recognized clinical manifestations of the disease. In their preventive action, however, they are less satisfactory. This action is feeble, superficial, and transitory, since the outbreaks of the disease seem to be prevented not at all by the prophylactic treatment. There is only one condition under which this preventive action has proven satisfactory—that is, when administration of the specifics prevents hereditary transmission of the disease from the husband or wife free from apparent manifestations. Daily experience demonstrates that mercury neutralizes the latent infection of the spermatozoa of the sperm, the ovule, and the blood which occasions hereditary syphilis. This, again, however, seems to be transitory, since after treatment and apparent cure hereditary transmission may appear latent and the parents themselves may be attacked by recurrences. It cannot be doubted that there is a tendency towards spontaneous cure in syphilis. Since well-directed treatment cannot injure the system, since it powerfully aids this tendency to spontaneous cure, the disease should never be abandoned to its spontaneous evolution. Whatever be the degree, form, tendency, or age of syphilis, it should always receive specific treatment. This is especially so when the disease is in its active state; medication should be directed not only against manifestations of the disease, but against the diathesis. Under these circumstances (the absence of symptoms), medication must be conducted somewhat by guesswork. Admitting that the syphilitic diathesis may be present, and admitting the value of the administration of specifics against this diathesis, the logical deduction would be to administer specifics during the entire period of life after syphilis is once acquired. This, however, is an unnecessary extreme, abandoned by its one-time most enthusiastic advocates.

Mauriac believes that the best preventive results from the specifics are to be obtained by pushing their curative action as far as possible each time manifestations appear. The indications under these circumstances are clear and correct, and the dosing should always be full. In the intervals, when no external signs of syphilis are to be found, the mercury can be suspended until new developments require its administration. Mauriac believes that during the periods of latency the administration of a specific is without good effect, excepting as a means of preventing hereditary syphilis. Here mercury is incontestably the strongest guarantee against the chance of transmission of the disease.—*Therapeutic Gazette*.

THE EFFECTS OF DIURETIN. BY DR. SABACHNIKOFF.

The author has studied the action of diuretin on animals in Prof. Pavloff's laboratory of pharmacology. He introduced the drug into the

lymph-hearts of frogs, and directly into the veins in rabbits, dogs, and cats. The results are summed up as follows :

(1) Diuretin, almost immediately after introduction into the blood, produces marked diuresis in rabbits and young dogs.

(2) Diuretin has no diuretic effect on adult dogs. It even causes a diminution of urine.

(3) This diminution of secretion disappears on administering narcotic doses of chloral or morphine ; and after section of the sympathetic, or of the pneumogastric, or, again, after section of the cerebral hemispheres.

(4) Diuretin acts chiefly on the renal epithelium.

(5) Contrary to what has been pointed out by Schroder, diuretin acts as a poison on warm-blooded animals, and, above all, on the nervous system. In no matter what doses given, it excites the brain.

(6) Under the influence of diuretin, the heart beats become more frequent, and in the larger doses the beats become irregular. Small doses even nearly always quicken respiration. Death takes place through its action on the heart and respiratory organs.

(7) The fatal dose of diuretin is seventy centigrams per kilo. of animal's weight. Of course, there are individual idiosyncrasies.

(8) Non-toxic doses of diuretin produce a temporary rise of temperature ; a toxic dose produces a marked rise of temperature that persists until death.

(9) Diuretin has undoubtedly an effect on the muscular system of both warm and cold-blooded animals.

(10) In large doses, diuretin brings on vomiting, and frequent liquid stools.

(11) Diuretin has a sialagogue action.

(12) Diuretin is not cumulative.

(13) Diuretin has an action on cardiac muscle analogous to the action of the accelerator nerve.

(14) In all doses, diuretin diminishes arterial pressure.—*Revue Chirurgicale*.
J.A.A.

THE USE OF MENTHOL IN PRURIGO.

Colombini publishes forty-four cases of pruriginous dermatitis treated with menthol according to the method of Dubreuilh and Archambault. The cases may be divided into three classes :

(1) Those in which an inflammation of the skin, accompanied by an eruption, produces itching ; as, for example, eczema.

(2) Those conditions of the skin in which the itching is the chief symptom, without any visible symptoms ; or, in other words, nervous pruritus.

(3) And, finally, in those cases in which eruptions having appeared, and been scratched, the disease is produced by the friction which is applied.

For these cases the following prescription is given :

R. Menthol, gr. lxxx. to clx.;
Alcohol, ℥iiss.

Or,

R. Menthol, gr. clx.;
Oil of sweet almonds, ℥iiss.

Or, again, an ointment consisting of :

R. Oxide of zinc,
Powdered starch, of each, ℥viss.;
Menthol, gr. vii. to xlv.;
Vaseline, ℥ii.

Or, finally,

R. Oxide of zinc,
Subnitrate of bismuth, of each, ℥iii.;
Menthol, gr. xv. to xlv.;
Powdered starch, ℥i.

The results which he obtained have been excellent in the first class, variable in the second class, and very good in the third class.—*L'Union Médicale*.

THE THERAPEUTIC VALUE OF STRYCHNINE.

Prof. De Giovanni, Turin, in a recent clinical lecture (*Rif. Med.*, 240-241), stated the following :

He employed strychnine as a general exciter, heart-and-vaso-stimulant, in adynamia and heart failure ; when these conditions occurred either in the course of acroupous pneumonia, or of typhoid fever, or in attacks of influenza or heart disease.

A possible *danger exists only in the mode of its administration*. The dispensing in pill form is to be avoided, as the dosage is not exact, and consequently leads to a culminative action of the drug. Strychnine should be administered in liquid form, either by the mouth or subcutaneously. He begins with the administration of 0.001 gramme [$\frac{1}{84}$ grain] *hypodermatically*, and increases the dose to 5, 8, 10, and 12 mgm. [$\frac{1}{12}$ — $\frac{1}{5}$ gr.] per day. In very excitable individuals the initial dose may be as small as half a milligramme [$\frac{1}{125}$ grain]. If rapid action is desirable, *two injections* can be given at the beginning, at an interval of from four to six hours.

Internally the initial dose is 1 milligramme (or even 2) [$\frac{1}{84}$ — $\frac{1}{32}$ grain], dissolved either in distilled water or aq. cinnamon, or chamomile water; which can be increased to 10, 20, 30, 40, and 50 milligrammes [$\frac{1}{6}$ to $\frac{3}{4}$ grain] per day.

Strychnine is best administered shortly before meals, if it is desired to affect the gastric functions. Administered in this way, strychnine serves several good purposes in such cases, without producing deleterious after effects; except a slight insomnia in a few instances, which condition soon disappears after the discontinuation of the drug.—*Merck's Bulletin*.

DR. E. LANG (*La Semaine Médical*) recommends the following in cutaneous diseases:

(1) ACNE:

White precipitate		grs. xxx. to $3i\frac{1}{4}$
Oxide of zinc	}	aa $3ii.ss.$
Sublimed Sulphur		
Benzoated lard	}	aa $3vi.$
Vaseline		
Balsam of Peru		$mxix.$

(2) CHLOASMATA AND PIGMENT SPOTS:

White precipitate	}	aa $3ss.$ to $3i\frac{1}{4}$
Subnitrate of bismuth		
Benzoated lard		$3i.$
Lanoline		$3v.$

(3) ITCH AND PRURIGO:

Naphthol (B)	}	aa $3v.$
Sublimed sulphur		
Prepared chalk		
Black soap		
Benzoated lard		$3ii.$
Lanoline		$3iss.$
Balsam of Peru		$3i\frac{1}{4}$

MICROBES AND CARNIVOROUS PLANTS. BY DR. J. N. TICHOUTKINE.

The author made a series of experiments in Professor Botaline's laboratory at St. Petersburg, and came to the following conclusions:

(1) The modifications of albuminoid substances in the juice of carnivorous plants are the results of the vital action of microbes, notably of bacteria.

(2) There exists always in the juice of full-grown carnivorous plants microbes which have the property of dissolving albuminoid substances.

(3) The commencement of the modification of the albuminoid substances does not coincide with the time of secretion of the juice. The modification commences only when a sufficient number of microbes have developed in the juice.

(4) It is through the air that the microbes get to the leaves of the carnivorous plants—not, of course, to the exclusion of other ways.

(5) We are to understand by the term carnivorous plant as being a plant that absorbs products elaborated by micro-organisms.

(6) The part of the process belonging to the plant is the secretion of the juice ; this juice then forms a favorable medium for the growth and function of the microbes.—*Revue Chirurgicale*. J.A.A.

THE ACTION OF ALCOHOL ON THE CIRCULATORY SYSTEM.

The internal administration of alcohol diminishes the blood pressure, in the first place as a result of dilatation of the arterials, and not because of any diminution of the force of the heart. If the latter were the case, a damming up of blood would take place in the left auricle, with a consequently increased blood pressure *there* ; but the very opposite takes place, as the ventricle contracts more vigorously and drains the auricle of its contained blood.

Alcohol also acts as an analeptic—at the same time producing diminished blood pressure form a *diminished excitation of the vaso-motor centres*. The greatest amount of arterial dilatation takes place in the pelvic region.

The diminished blood pressure resulting from the cutting of the splanchnic nerve is *not* increased by the administration of alcohol. Irritation of the nerve increases the blood pressure after it has lessened by the administration of alcohol.

Alcohol has no deleterious effect either on the vaso-motor nerves or on the vagus.—Z. Gutenkorn, in *Zeitschrift für Klin. Med.*, 1892.

LEAD POISONING FROM A BULLET IN THE TIBIA

E. Kuster and L. Lewin contribute the following case (*Centralblatt für Chirurgie* for February 25th, 1893) :

The patient, aged forty-eight, clerk, was shot in August, 1870, the ball lodging in the head of the tibia. The wound healed without suppuration. Patient well until January, 1888, when he was subject to severe colicky pains in the epigastrium every two weeks, followed by loss of strength, emaciation, constipation, and slight jaundice. In August the patient was confined to his bed, and shortly after trembling of the hands appeared, and, still later, a distinct blue line on the gums. Lead was found in the urine, but no albumen. In January, 1889, the head of the tibia was laid open and scraped out. The bone was soft and infiltrated with gray and blue-black spots. No bullet was found. The symptoms of lead poisoning gradually ameliorated, and by the middle of March, 1889, the colics and blue line on gums had disappeared.—*Therapeutic Gazette*.

AN OINTMENT FOR THE SKIN SPOTS OF PREGNANCY.

R. Pure oxide of zinc, gr. iv.;
 Yellow oxide of mercury, gr. xvi.;
 Castor oil,
 Coca-butter, of each, $\bar{\text{z}}$ iiiss.;
 Essence of roses, gtt. x.

Make an ointment, and apply, with friction, twice a day.

At night allow some of the ointment to remain on the parts affected.—
L'Union Médicale.

 METHOD OF COVERING UNPIGMENTED SPOTS IN THE SKIN AFTER
 BURNS, ETC.

Dr. K. Paschkis (*Med. Neuigkeiten*) employs the following procedure to cover over unpigmented spots or scars following burns. A mixture of the sulphate of baryta, yellow ochre, and water, of the color of the skin, is made and laid on in a thick layer. This is then tattooed into the skin by means of an instrument containing from three to five well-disinfected needles. In this manner he has succeeded in coloring ugly vaccination marks and spots left after burns the color of the surrounding skin.—*Lancet-Clinic.*

 SODIUM IODIDE IN CHRONIC AORTITIS.

Prof. Potain, of Paris, has obtained excellent results in chronic aortitis from the use of a two per cent. aqueous solution of sodium iodide, taken in teaspoonful doses thrice daily, in a cupful of infusion of orange leaves.

To be efficacious, this treatment must be continued for several months; it may be employed during the first three weeks of every month, and suspended during the remainder of the month. In the author's cases, where a definite cure was attained, the treatment lasted about eighteen months on an average.—*Merck's Bulletin.*

 LOCAL ANESTHESIA FOR MINOR OPERATIONS.

	Parts.
Menthol	1
Ether.....	15
Chloroform.....	100

Use in spray apparatus.—*Dobisch, in Medical Record.*

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.THE LOWEST LIMIT OF PELVIC CONTRACTION ADMITTING
OF SYMPHYSIOTOMY.

An impression prevails that symphysiotomy is the proper operative treatment for labor obstructed by a moderate degree of contraction in the pelvis, in which the other alternatives are the induction of premature labor and craniotomy. This view was expressed without contradiction at a recent meeting of a prominent medical society, at which the operation was the sole topic of discussion. Increasing experience, however, demonstrates that symphysiotomy is to be depended upon in the case of a pelvis symmetrically contracted, that a few months ago would have been thought quite impassable for a living child, even though the symphysis were cut. Leopold has recently delivered in this way a woman with a pelvic conjugate of only 6 cm., and more than a month ago, in the Philadelphia Hospital, I delivered without difficulty a rachitic dwarf, a primipara, $4\frac{1}{2}$ feet high, whose conjugate was, I think, very little, if at all, over 65 mm. The diagonal was a scant 9 cm., but the conjugato-symphyseal angle was so increased that $2\frac{1}{4}$ cm. was, in my judgment, a sum scarcely sufficient for the subtraction. To be on the safe side, I induced labor two weeks before term; then dilated the cervix, performed version after opening the symphysis, and extracted the child in a few minutes. It weighed six pounds four ounces. The head measurements were: Bi-temporal, 8 cm.; bi-parietal, 9 cm.; occipito-frontal, $11\frac{1}{2}$ cm.; occipito-frontal circumference, $33\frac{1}{2}$ cm. The woman had an absolutely afebrile convalescence, and the child is thriving.

The combination of delivery before term and symphysiotomy will give us entire control over any grade of symmetrically-contracted pelvis that we are likely to see in this country, and whenever possible the two should be combined. In a very large experience with the induction of labor from two to four weeks before term, I have found the mortality for children no greater than in delivery at full maturity, whereas the slight diminution in head diameters and the compressibility make a vast difference in the ease of delivery. Another and a very great advantage in the induction of labor when symphysiotomy is contemplated is the fact that a convenient hour can be selected by the operator for the delivery, and all preparations can be made for the appointed time, as in an abdominal section. The plan

adopted in the case here reported, and always followed by me if practicable, was as follows: Early in the morning a bougie is inserted, and an ounce of glycerine injected alongside of it. Twenty-four hours later the lower abdomen is cleaned and shaved. By this time, if the pelvis is so contracted that the head cannot enter the inlet, the cervix will be softened, but scarcely at all dilated. The cervical canal is then dilated with three sizes of water-bags, the largest twice the size of the largest Barnes' bag, each left in for about an hour. This is most conveniently done by an assistant. At about the time that the artificial dilatation is completed, the operator arrives prepared to operate and deliver as soon as the patient is anesthetized, the vagina is disinfected, and the instruments are sterilized.—*Barton Cooke Hirst, M.D., in Medical News.*

OBSTETRIC PARALYSIS.

The pathology and etiology of this affection are clearly discussed by Dr. C. F. Carter (*Boston Medical and Surgical Journal*, May 4th, 1893). He tabulates Lovett's and Burr's reported cases and sixteen of his own, making statistics of thirty-two cases. He concludes that the upper-arm type of obstetric paralysis is due to a stretching of the upper trunk of the brachial plexus (formed from the fifth and sixth cervical nerves) during the process of delivery. This is brought about by traction on the head or pressure on the breast when the shoulder is retarded, or by traction on the shoulder when the head is retarded—not by pressure of the forceps, as often assumed. The prognosis, as a rule, is good, though recovery may be delayed for months or years. Permanent disability is rare.

The muscles paralyzed are the deltoid, supraspinatus, infraspinatus, teres minor, biceps, and brachialis anticus, with the supinators. In some of the severe cases some of the extensors of the wrist and fingers may be involved. The affected arm is held by the side in a position of internal rotation, the elbow pointing outward. The fingers are usually semiflexed. The paralysis is rarely noticed before the second or third day. After a few days the reaction of degeneration is well marked in the affected muscles, and, if one were able to test satisfactorily in such young subjects, diminution of sensation would probably be found on the outer aspect of the shoulder and upper arm, and on the radial side of the forearm.

The treatment consists in the use of passive movements, massage, and electricity (galvanism two or three times weekly through the brachial plexus and affected muscles).—*New York Medical Journal.*

DEATHS FROM PUERPERAL SEPTICEMIA.

It is quite likely that many, if not the majority, think that puerperal fever is much less common now than it was twenty years ago. It has

been proved beyond a doubt that it has been almost banished from well-regulated lying-in hospitals where the mortality was often very serious in times past. Has it diminished to any appreciable extent in private practice? I hope there is less of this terrible disease in Ontario than there was ten years ago ; but I (like many others) am in a position to know that there is still too much of it.

Dr. Robert Boxall, of the Middlesex Hospital, London, has investigated the matter, with results which are certainly very discouraging. He has compared the reports of the Registrar-General for more than forty years, and, although he acknowledges that they are especially defective in regard to puerperal fever, he quite properly contends that they will answer very well in showing comparative results in different years.

He summarizes as follows (*London Lancet*, July 1st) : " It appears that the death rate from childbirth has not been appreciably diminished so far as England and Wales are concerned, and that, as regards puerperal fever, an actual increase has taken place in the provinces. . . . Such results as have been obtained in lying-in hospitals and maternities by the adoption of antiseptic measures in the elimination of septic processes are not as yet apparent in obstetric practice generally throughout the country."

A.H.W.

TREATMENT OF RUPTURE OF THE UTERUS.

Herzfeld, of Vienna (*Centralbl. f. Gynak., Brit. Med. Jour.*), recommends treating rupture of the uterus by simply plugging the laceration with iodoform gauze. He says that plugging is always sufficient unless there is so much hemorrhage that pressure from below would be insufficient to check it. In cases where the plugging has been done, especially if aseptic, the prognosis is favorable ; if sepsis has set in, abdominal section is as unfavorable as plugging.

GYNECOLOGY

IN CHARGE OF

JAMES F. W. ROSS, M.D. Tor.,

Lecturer in Gynecology in the Woman's Medical College; Gynecologist to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

ABDOMINAL SECTION FOR SUBCUTANEOUS RUPTURE OF THE SPLEEN.

A case was reported to the Clinical Society of London on the 14th of April, 1893, by Dr. W. H. Battle. "A patient who had fallen through a skylight about fifteen feet was admitted to St. Thomas' Hospital three hours after. He walked from the place of the injury, half a mile, to the hospital. The pulse was found weak, respiration shallow, and patient evidently suffering from shock. The tenth lower rib was found to be broken. Temperature was 97.6° next morning. He vomited once at eleven o'clock, pulse 120, and respirations almost entirely thoracic. Dullness was noticed on percussion, in both flanks; temperature 96°. About two o'clock in the afternoon evidences of fluid in the peritoneum were marked; the pulse had become weaker, and it was now 128. A diagnosis of rupture of the spleen was made, and it was evident that unless some means of improving the man's general condition could be found an operation would only be too likely to hasten the end.

"Four pints of a saline solution were infused, and as a consequence the pulse rate dropped to 95; the patient's color and appearance were improved. Abdominal section in the median line above the umbilicus was performed at six o'clock; seventy-five ounces of blood and blood clots were removed from the abdomen. A deep laceration of the spleen in its outer surface, extending to its anterior surface, was found, but owing to adhesions could not be brought to the surface; an attempt was therefore made to pass a ligature around the vessels. It was found necessary to make another incision further out in the loin to carry out this procedure. Stout silk was then passed and tied, and arrested the hemorrhage; the abdomen was washed out and closed. Another saline infusion, amounting to five pints, was administered into the left internal saphena vein at the ankle. In the evening bright blood began to flow from the drainage tube. The next day he was feeling very well; temperature 101.4° at 4 a.m., and 99° at 9 a.m. Later, he vomited. On the 18th, vomiting continued; this was accompanied by pain in the abdomen, with distention; the signs of the peritonitis increased. He died in the evening of the sixth day after the reception of of the injury."

In the discussion, it was stated that death usually takes place in such cases in from seven minutes to half an hour. Shock is usually marked, and there may be an absence of tenderness.—*Medical Press and Circular*.

ANOTHER SUCCESSFUL GASTRO-ENTEROSTOMY.

Mr. Herbert Allingham reported to the Clinical Society of London a successful case of gastro-enterostomy. "The operation was performed for a cancer of the pyloric end of the stomach; too much of the wall of the stomach was involved to allow of the removal of the malignant mass. The patient was greatly relieved by the operation, and gained in weight, but died about five months after of a secondary deposit in the lungs."

In the discussion, those present who had had experience with this operation agreed that the sensation of hunger was usually relieved immediately after the operation.

The question of regurgitation of bile in the stomach was also taken up. Some thought that incision should be made on the posterior wall of the stomach, so as to permit of the more ready onward progress of the contents of the stomach into the jejunum when the patient is in the dorsal position. The regurgitation of bile seemed to bring on an attack similar to an ordinary bilious attack, relief following the vomiting.

GASTROTOMY FOR MASS OF HAIR IN THE STOMACH.

"Mr. Ormsby, of Dublin, recently was called to see a young lady of nineteen, who was suffering from a painful elongated transverse enlargement of the abdomen; this had occupied the epigastric and umbilical regions for two years. Various opinions had been expressed as to the nature of the growth, and operation was eventually decided upon. Under ether the abdomen was opened, and the growth was found enclosed in the stomach. Gastrotomy was performed; stomach opened to the extent of five inches, and a large black-looking body, rounded at each end, was removed; this was about twelve inches long, and nine inches in circumference; it was in shape much like a large cucumber. When examined, it was found to be composed of human hair, mixed with inspissated aliment and gastric mucus. The patient afterwards admitted that she had been eating her hair for a number of years. The patient made an excellent recovery."

HERNIAL OPENING IN THE BROAD LIGAMENT.

At the meeting of the Royal Academy of Medicine in Ireland, Dr. Alfred Smith showed a left broad ligament with a well marked hernial opening situated half an inch from the uterus, and directly under the fallopian tube. The patient died with symptoms of intestinal obstruction. At the *post-mortem* examination, it was found that six feet of the ileum had passed through this hernial opening, and was strangulated. There was a small dermoid cyst of the corresponding ovary which had become adherent to the abdominal wall, and considerably stretched the broad ligament.
—*Medical Press and Circular.*

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

ELECTROLYSIS IN THE TREATMENT OF FIBROUS ANCHYLOSIS.

If one may judge by the small amount of literature presented, electricity seems still to be employed in surgery only by the gynecologist as a means of reducing fibroid tumors, fibrous adhesions, and other conditions in this special branch, and by surgeons for diagnostic and cautery work, for traumatic paralyses, and, perhaps, by a few in the treatment of strictures of the urethra and rectum and some other conditions; but none seem to have made use of it, except incidentally, in the treatment of restriction of motion in joints, tendons, and muscles, due to the development of new-formed fibrous tissue following traumatism, whether accidental or operative, and disease.

The electrolytic action is obtained with the galvanic current, either continuous, or what Dr. Piffard calls a fluctuating current. The mode of application briefly is as follows: I use electrodes varying in size according to the part under treatment and the extent of the adhesions; usually one large flat electrode and one ordinary sponge electrode with handle. The large one is easily made of thin sheet copper, and may be bent to any shape. It may be covered with sponge, cotton, and sheet lint, or other material, and placed without permanent covering in the dish of solution, a flat sponge or some cotton laid upon it and the part to be treated rested upon that, perhaps partly surrounded by the solution. The large electrode should be nearest the adhesions and attached to the negative pole; the small one applied to the opposite side.

Both electrodes should be wet in a salt solution, and of several solutions I have tried best results have been obtained with a rather strong one of ammonium chloride.

The electrodes applied, the current is then turned on and increased till the patient will stand no more. The amount that can be given depends on the sensibility of the part and the temperament of the patient. If applied to the same part in two healthy individuals, the amount borne by each will be found to vary very greatly. Passing a current through my

own hand I can bear not more than 10 to 12 milliampères, while I have given through the hands of another 50 milliampères with seemingly no greater discomfort.

The amount that a patient will take may be recorded from the milliamperemeter at the first and second applications; and it will be found that the same or increased amounts may be given at future applications, except in some cases. Such a record will also be found useful in preventing any attempt at malingering.

As to the strength of current necessary to dissolve adhesions I can make no statement, except that I have obtained results with a current as low as 8 to 10, and have given as high as 75 milliampères, but have noticed no proportionate increase in the dissolution. I have remarked, however, that the older the adhesions the greater the current necessary to dissolve them, and believe in a strong current for a short time rather than a weak one for a longer time.

The duration of the applications I make from ten to thirty minutes, and repeat them at intervals varying from one to five days.—*F. W. Gwyer, in Annals of Surgery.*

ON TREATMENT OF BURNS.

The profession are not yet of one mind as to the ideal dressing in recent burns. The following is a *résumé*, taken from the *Pacific Record*, of an article by Dr. K. A. Von Bardeleben (Berlin) upon this subject:

Up to our days, Stahl's burns-remedy (Ol. lini and aq. calcis ana) has occupied the foremost place in the treatment of burns. The only improvement consisted in endeavors to give some play to the antiseptic principle, and for this purpose carbolic acid or some other antiseptic was added to this remedy.

In recent times iodoform has been used in the treatment of burns in the way of a powder applied to the sore spots. Unfortunately frequent phenomena of intoxication were observed, necessitating a change of bandage accompanied by pains, but, on the other hand, demonstrating how easily medicaments are resorbed by burns to which they are applied.

Barring trifling burns, in the treatment of which collodium elasticum and argent. nitr. solutions in weak concentration find a useful application, the author recommends bismuth in powder for all other cases.

Since the beginning of the year 1889 a typical bismuth dry bandage has been used in the surgical department of the Friedrichshain Infirmary, at first in some of the patients, and later on, after having ascertained the good results, in all of the patients admitted on account of fresh burns.

After carefully cleaning, the burned places were rinsed with carbolic or salicyl (3 per cent.) solution. Then, after removing thoroughly

all blisters and their contents, necessary antiseptic precautions being observed, an extensive bepowdering of the whole burned surface with bismuth powder is proceeded with. Then, in order to effect a permanent exclusion of the air, a bandage of Bruns' wadding is applied, which has to be renewed later when it becomes soaked, with the exception of the lowest layer of the bandage.

Subsequently the bandage was somewhat modified. After the fashion of gypsum bandages, unstarched gauze bandages were impregnated with bismuth powder to be wound around the extremities affected with burns. Later on, for the purpose of economizing and of obtaining a closer adhesion, the bismuth powder was mixed with an equal quantity of amylum.

The advantages of this bandage treatment are the following: (1) The bandage answers the requirements of a rational antiseptic wound treatment; (2) the bandage may be left for fourteen days, while linseed oil bandage has to be changed very often in the midst of great sufferings; (3) phenomena of intoxications are never to be feared.

Sometimes transplantations of skin had to be performed. Whenever, after removing the first bandage, a probability of healing without transplantation was apparent, all further treatment was limited to the application of a simple ointment bandage with Graf's boron-vaseline, under which healing usually took place very rapidly.

THE POINT OF ELECTION FOR THE INJECTION OF IODOFORM IN TUBERCULOUS HIP DISEASE.

In urging the treatment of tuberculous disease of the hip by injections of iodoform-glycerine emulsion, Büngner (*Centralblatt für Chirurgie*) says: "It can no longer be contested that iodoform has a distinct anti-tubercular action, not only in cold abscesses, but also in tuberculosis of the joints. Instead of following the method of Krause and making the puncture for the injection above the greater trochanter, he advises the method of Küster. The spot where the femoral artery passes over the brim of the pelvis is determined, and a line drawn from it to the apex of the greater trochanter; where this line crosses the sartorius muscle at its inner border is the point where the trochar is to be introduced. The joint at this point is not only comparatively superficial, but the capsule also is thin, and there is an overlying bursa which, once in ten times, communicates with the joint cavity. A comparative test of the two methods of Krause and Küster on dead bodies gave, for the former, nineteen successes and six failures; for the latter, twenty-five successes, the fluid being well distributed in the joint, and comparatively little around the outside. A

hypodermic syringe of ten grams capacity, with a needle five to seven centimetres long, was used, five to ten grams of a 20 per cent. mixture with glycerine being injected and repeated in from one to four weeks.—*Atlanta Medical and Surgical Journal*.

NOTE.—In one case of tuberculous disease of the hip, and in three of similar disease of the knee, we have incised the joint and introduced several iodoform suppositories. These are carefully prepared, and contain ten grains of iodoform and ten grains of boracic acid. The results have been satisfactory. L.M.S.

NOTE ON THE DIFFICULTY OF EFFECTING COMPLETE REMOVAL
OF THE NAILS.

In a paper read last November before the Royal Society, by Dr. F. A. Dixey, attention is asked to the fact that the corium underlying the epithelium of the nail is continuous with the phalanx, and that the two subjects are histologically very similar to one another.

This anatomical fact may perhaps account for the extreme difficulty which exists, especially in children, in extirpating a nail. I had recently occasion to attempt this in the case of a girl in whom I was told that two operations had failed. Although, as the operator told me, he had taken the utmost pains to secure the removal of the entire nail, fragments of a new one had been reproduced, and as they had again inflamed and become painful I was asked to attempt it the third time, on account of the disappointment which had been encountered. It may be understood that under such circumstances I took especial care to excise the whole. The child was under an anesthetic, and the circulation being controlled by an india rubber band the dissection was not obscured by blood. I removed, as I thought, everything down to the bone, and in parts even took portions of periosteum. At the sides I left nothing that could be suspected to be nail-bed. In spite, however, of all my precautions, the wound was no sooner healed than the scar, at several different points, began to form nail. It was not very much, but enough to be quite definite and to cause some irritation.—*Mr. Hutchinson, in The Archives of Surgery*.

ENUCLEATION OF CANCEROUS GLANDS FROM THE INGUINAL REGION.

Dr. Rupprecht (*Centralb. f. Chirurgie*) recommends the following operation, which he has employed during the last ten years in twenty-three cases: Incision from the tubercle of the pubis to the anterior superior iliac spine. Second incision in the course of the large vessels extending downward from the first incision. The flaps thus formed are dissected off from subjacent tissues, and the exposed fatty layer stripped

off in all directions toward the fovea ovalis by blunt means. The saphena vein is divided at the lower angle of the wound. The entire mass of fat in which the inguinal glands are imbedded is now attached only at the point of junction of the saphena and crural veins, and is removed after ligation of the vena saphena close to the crural vein. If considerable defect of skin exists the wound is tamponed; otherwise it is sutured.—
International Journal of Surgery.

PEDIATRICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital
for Sick Children; Clinical Lecturer on Diseases of Children
in the Woman's Medical College.

TO WHAT EXTENT CAN EPILEPSY BE PREVENTED BY EARLY DIAGNOSIS AND TREATMENT.

Dr. Graeme M. Hammond read a paper on this subject before the New York Academy of Medicine. The early recognition of epilepsy is of great importance, for the nervous system is always injured by a convulsion. In a large proportion of cases of epilepsy, it will be found that convulsions had occurred during infancy. The form of epilepsy known as petit mal is especially liable to be overlooked. It is characterized by brief attacks of giddiness, a sudden sense of fear, twitching of certain muscles, loss of voice, or indescribable cardiac sensations. More common than these is a momentary fixed stare. A child who falls frequently without cause should receive immediate attention. Up to the age of seven years, the brain grows with great rapidity. Attacks of this character decidedly retard its growth. There is a strong tendency for functional disorders of the brain to become organic, for the delicate brain cells are easily changed. The earlier treatment is begun, the better the chance of cure. The family physician meets these cases first, and should be able to recognize them at once. It would be wise for him to instruct the mothers regarding these symptoms when a neuropathic family tendency is present.

The usual cause of convulsions is rachitis and defective digestion. There is in some families and individuals a strong neuropathic predisposition to convulsions. This should be taken into consideration as well as the exciting cause. A convulsion should never be considered as unimportant, for no one can foresee what results may follow.

The convulsive tendency should be combated by training of body and training of mind, and by proper diet. Skim-milk, peptonized and

sterilized, if necessary, should be a large part of the diet to three years, nitrogenous food being omitted for one year, and resumed cautiously. Bromides still hold their place. No other drug gives so uniform and certain relief. In rare cases of petit mal, bromides act badly. Strychnia and phosphorus are to be selected. Anemia should be vigorously combated by proper tonics. Treatment should be continued for at least one and a half or two years after the last seizure. If the case is severe, it should be continued for four years. It need not be continued, but should be given for five or six weeks, with intervals of two months. The amount administered should be just sufficient to do the work, the bad results of overdosing being avoided. Five grains to fifteen grains three times a day are usually sufficient, and will not retard mental and physical growth. —*Medical Review.*

CONSTIPATION.

In an excellent paper on the subject published in the *American Practitioner and News*, June 30, 1893, Dr. Skinner points out that one of the great, if not the greatest, causes of constipation is the failure to take a sufficient quantity of water. This is chiefly true in the case of those who lead inactive lives, and whose occupations call for little movement. They are noticeably small drinkers, seldom taking water except at meal times, and then drink to excess, impairing by dilution the gastric secretion. It is not easy for us to realize the amount of water thrown off by the healthy man or woman in twenty-four hours. By the kidneys, we lose 42 ounces; by the lungs, we lose 23 ounces; by the skin, we lose 15 ounces. Now, contrast this with the amount taken during the same time, and we find little enough left for the bowels under the most favorable circumstances; and when this is lessened by one-fourth or one-half, we find nothing left to keep the stools soft and in a proper condition to be, by peristalsis, packed down into the sigmoid ready for prompt and easy expulsion. The author advises the habitual drinking of water in the interval between meals as a remedy for the condition, and in a vast number of cases this is all that is required. He has the patient drink a tumbler of water about half an hour before each meal, and a fourth when retiring. Constipation in young subjects may be overcome in the same way.

A CASE OF SCURVY IN A BREAST-FED INFANT.

An interesting case of infantile scurvy is reported by Dr. Southgate, Newport, Ky., in *Archives of Pediatrics*, June, 1893. The child was about fifteen months old, and had been seen on previous occasions for eczemas and chronic indigestion. It had been fed exclusively from the breast, and the mother said she always had a plentiful supply of milk. The child's

surroundings were not of the best. The mother was a washwoman, and occupied apartments in a tenement house. The child had grown well, but was pale, and had "kernels" in his neck. When first seen by the author, he lay helpless in the cradle, listless, emaciated, and anemic; cried when handled. His legs, feet, and hands were much swollen, and seemed insensible to the prick of a needle. Blood was oozing from over an on-coming tooth; otherwise, the mouth was quite healthy. Stomach unstable, and stools offensive. Hemorrhagic spots about the size of a nickel were scattered thickly over front and back. Child presented many indications of rickets. Blood examination: Hemoglobin, 30 per cent. of normal; red corpuscles, 1,440,000 per cm. ; white corpuscles, 1 to 412. Ordered salol, grs. 2, every three hours, and continued breast milk. Continued this treatment several days, when anti-scorbutic diet of cow's milk, meat juice, orange juice, and potato were given. Change in diet made Jan. 25th, and on Feb. 10th child is much improved. Hemoglobin, 40 per cent., red corpuscles, 1,500,000. Feb. 17th, hemoglobin, 60 per cent.; red corpuscles, 2,200,000. March 20th, hemoglobin, 70 per cent.; red corpuscles, 3,200,000. The mother's milk had been analyzed, and it was found to be normal.

The cause of the scurvy seemed somewhat obscure, and the author is of opinion that it might perhaps be due to tuberculous taint, as tuberculosis existed in several members of the family. The treatment throughout had been salol and the change in diet.

TREATMENT OF CHOLERA INFANTUM.

Gross, of New York (*Therap. Monatsch.*, May, 1893), who states that an exceptionally large number of cases of infantile cholera come under his notice, claims to have successfully combated this disease: first, by hygienic and dietetic measures; secondly, only by drugs. Children showing marked pyrexia attended by convulsions, but as yet no other symptoms, are subjected to a rectal irrigation of cold water, and friction with alcohol in iced water. If necessary, small doses of antipyrin are frequently administered, and should the patient then have overcome the acute onset a strict diet is enforced, to commence twenty-four hours after the attack, all milk being excluded, regardless of the child's age. On the other hand, thin gruel, boiled sugar water, or tea, are given frequently in small quantities, and salt water irrigations are administered once in twelve hours, while six minute calomel powders are given at two-hourly intervals. By these means the attack is cut short, and in twenty-four hours milk from the breast or otherwise can be given with impunity. Should, on the other hand, the malady be developed, the abstinence from milk should be longer, the injections should be made more frequently, and a sufficiency

of fresh air in or out of doors must be enjoined. In addition, calomel and salol, or the latter only in the later stages, are frequently administered, and, during recovery, hydrochloric acid and pepsin are substituted. Obstinate cases which have lapsed into a chronic condition are relieved by weak tannic acid injections, and continuous vomiting generally yields to flushing of the stomach once daily with weak hydrochloric acid, one operation generally sufficing. Should the child be first seen in a collapsed condition, the author recommends immediate warm irrigation of the stomach and rectum with hot mustard baths, and small quantities of stimulants, as even the most serious cases often improve under energetic action.—(*Epitome*) *British Medical Journal*.

PASTEURIZATION VERSUS STERILIZATION IN THE PRESERVATION OF MILK.

In a paper read before the New York Academy of Medicine, Dr. R. G. Freeman points out that pathogenic organisms can be destroyed by raising the milk to a temperature of 75°, and condemns the practice of raising the temperature to the boiling point for a greater or less length of time. Exposure to the lower temperature, which is sufficient to kill the organisms, he calls pasteurization; while to the boiling process he applies the term sterilization. The author claims that while the higher temperature must certainly kill the germs, at the same time it brings about certain changes in the milk which make it unwholesome. These changes began to take place when the temperature went above 80° C. By actual experiment, he had been able, by raising the temperature to 75° and continuing at that point, to sterilize milk which had contained the following germs: That of diphtheria, of tuberculosis, of cholera, of typhoid fever, the streptococcus pyogenes, the streptococcus pyogenes aureus. The milk should be cooled as quickly as possible.

TREATMENT OF RINGWORM.

The recent treatments of tinea tonsurans show a strong tendency toward the use of losophan, a new and very active mycotic which has been giving remarkably good results. Losophan is a tri-iodocresol, very rich in iodine (about 80 per cent.), with which, on application to dermatologic lesions, it slowly parts, thus avoiding toxic effects, while making the pathological field untenable for living organisms. For these reasons, losophan is indicated in all cutaneous conditions due to the development of the trichophyton fungus, in mycosis, pityriasis, sycosis, prurigo, pediculosis, and in all of the large groups of skin diseases due to the presence of filamentous fungi or microspores. The clinical reports advise the use of losophan in one to two per cent. ointments with lanolin or vaselin. Where a wash is needed, a solution should be made of one or two parts of losophan in a

mixture of twenty-five parts of water with seventy-five parts of alcohol. The mixture keeps well. Losophan has already been tested in the treatment of phimosis and chancre. The best results were gained from a one per cent. powder dusted over the lesions.—*Albany Medical Annals*.

FETAL HYDROCEPHALUS: SPONTANEOUS CURE.

Schrader (*Centralbl. f. Gynak.*, No. 16, 1893) recently exhibited at a German society a photograph of a child taken when it was eight days old. On its scalp lay a bright red scar over two and a half inches long and one-half inch broad. It ran a little to the left of the middle line, chiefly along the sagittal, partly along the frontal, suture. The cranial vault under the scar was deficient, and the scalp seemed adherent to the periosteum. This condition indicated that very acute hydrocephalus occurred late in pregnancy, causing absorption of the cranial bones and hernia of the meninges, which healed before birth. The child was well developed and showed no signs of hydrocephalus after birth. The scar tissue turned darker and began to fall off even before the photograph was taken. The child lived and grew for a while, but died when three months old. No necropsy was allowed. The mother did not receive any kind of injury during pregnancy.—(*Epitome*) *British Medical Journal*.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist to Toronto General Hospital and Home for Incurables.

ESCAPE OF BACTERIA WITH THE SECRETIONS.

The question of the excretion of living bacteria from the body has given rise to many experiments. In 1882 Cohnheim suggested that the kidneys were the chief roads of exit by which invading germs were expelled. Although the secretions in health are sterile (Pasteur, Meissner, Watson Cheyne, Lister, etc.), the specific bacterium of an inoculated disease can be cultivated from the urine of the infected subject in some cases (Philippowicy, Finkler and Prior, Neumaun, etc.). But allowing that the process of obtaining them from the urine were such as would exclude the possibility of infection from the tissues, it still remains to be shown that the germs have really passed outward through an intact living membrane before that passage outward can be regarded in any sense as excretion.

That living germs enter the body through living membranes (pulmonary or intestinal) must be admitted ; but so far, at least, some lesion of the membrane may always be supposed, for there is no test which can be relied upon to demonstrate its absence—a fact not to be wondered at, considering the great extent of the area to be examined, and the smallness of the lesion that might suffice for infection. But the excreting area of the kidneys, though large, is so compactly arranged that microscopical examination of the whole of it is possible, while a yet more delicate test for the presence of lesions is available.

A lesion of the renal epithelium may be imagined without albuminuria, yet albuminuria cannot be imagined without a lesion. The protoplasm of the tubules normally resists the passage of albumin from the blood into the urine ; in slight albuminuria, changes not recognizable by the microscope, and predicated, then, only from their results, do undoubtedly occur, and of such a nature as to diminish that resistance. The epithelial excreting membrane is no longer intact. Hence, if bacteria are found in urine, and albumin also is present, it is impossible to assert that an intact membrane excreted them ; though, at the same time, the absence of albumin does not exclude the possibility of the existence of a lesion sufficient to allow *bacteria* to pass, even where *albumin* would not.

These considerations led Sherrington to examine the somewhat conflicting evidence on the question anew. He devised a method of obtaining the urine free from the possibility of infection from the tissues. Wyssokowitsch had concluded that bacteria never reached the urine except when carried directly into it by hemorrhage from some part of the urinary tract. Sherrington therefore examined spectroscopically for hemoglobin in each case—a liberal concession to this view. The results of other investigators (Trambusti, Maffucci), who, on the contrary, denied the necessary presence of lesions, at least as detectable microscopically, he rejected on the ground that such examination of the kidneys could not be sufficiently exhaustive. Thus he relied chiefly on analysis for the proof of the presence of such lesions.

His results not only reconciled those of previous experimenters, but allow the formulation of a very attractive theory. He found that non-pathogenic bacteria do not appear in the urine at all. Of the pathogenic forms, some were not recoverable from the urine ; others were found, but were accompanied by hemorrhages ; while a few (*B. anthracis*, *B. pyocyaneus*, *B. mallei*, *B. murisepticus*, and a pneumo-bacillus) occurred without hemorrhages, but with a certain amount of coagulable proteid in some cases. From sixty-eight experiments he concludes :

(1) That uninjured renal excreting membrane does not allow the escape of any form of bacteria, pathogenic or non-pathogenic.

(2) That non-pathogenic forms have no power to injure the renal epithelium, and hence their eventual disappearance from the body after inoculation occurs by some other path.

(3) That pathogenic forms escape only after lesions of the urinary passages have been set up. Since such lesions do not occur until some time after intravascular inoculation, they are not the result of the direct action of the micro-organic body, but of the toxins secreted by it in its life processes.

(4) That although in those cases where the concentration of the irritant produces hemorrhage from the urinary passages the bacteria thereafter found in the urine may be only those of the escaped blood, and so have reached the urine through a rent in the excreting membrane, yet where there is no hemorrhage, but albumin is found with the bacteria, it is reasonable to suppose that the lesions of the albuminuria allowed their escape. Further, that when albumin does not occur, the interval always found between the inoculation and the appearance in the urine of bacteria, suggests that a process of intoxication of the epithelium by the soluble excreta of the bacteria is necessary before the bacteria themselves can escape.

Finally, then, the passage of bacteria through the renal excreting epithelium is not a true excretion, but is rather analogous to the passage of serum-albumin through the same membrane.

Similar results were obtained from examination of the bile in some forty-nine experiments; but the bacteria appeared in the bile more freely than in the urine. From the aqueous humor no results were obtained. In no case were the virulence or power of growth of the germs impaired, a suggestive fact for prophylaxis.—*C. S. Sherrington, in Journal of Pathology and Bacteriology* H.H.

CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF CIRRHOSIS OF THE LIVER IN MAN. W. JANOWSKI, VARSOVIE, 1893.

In this work, based upon ten cases of *biliary* cirrhosis studied at the Pathological Institute of Varsovie, the author, by comparison of these cases with results experimentally obtained by ligature of the biliary canal, has arrived at the following conclusions: The fact most constantly noted in biliary cirrhosis is the occurrence of necrotic foci situated in the peripheral parts of hepatic lobules. The number and dimensions of these foci vary markedly. One sees fewest of them if the study of the liver has been delayed for some time after the beginning of retention of bile, and every focus will disappear after a certain period. Around these necrotic areas there is infiltration and capillary hyperemia, and this is a result of the action of the necrotic areas, which act as foreign bodies upon the surrounding tissue. The prime factor favoring the formation of the

necrotic areas is the rupture of bile capillaries under increased bile pressure. This rupture is most frequently seen in the outer zone of an hepatic lobule, because it is there that increase of pressure in the bile capillaries occurs most readily; it is there that accumulation (?) of bile, with consecutive anemia and necrobiosis of surrounding parts, most often occurs. The author thinks that the toxic action of bile in the course of biliary cirrhosis is greater than usual, its properties being modified by retention. The formation of a precipitate from the bile in the shape of calculi ought also to have considerable influence in this respect. In addition to the factors already spoken of, the author makes mention of the compression of the blood capillaries by the extravasated bile. This gives rise to anemia. There results disorder of nutrition in the hepatic cells, which, on this account, submit themselves more readily to the necrosing action of the bile.

The second constant feature of these cases observed by the author is the inflammation and new formation of bile canaliculi. Infiltration is seen through the entire thickness of the walls of the bile channels; their epithelium is desquamated, and a number of cells increased. Amongst them are often seen cells with two nuclei. Infiltration takes place *around* the bile ducts, and terminates in the formation of connective tissue in their vicinity. The connective tissue becomes gradually poorer in cells. The new formation of bile ducts depends principally—almost exclusively—upon the multiplication of the epithelial cells of the original bile ducts, but the author does not believe himself justified in denying the possibility of the transformation of hepatic cells into the lining cells of biliary ducts. The characteristic disposition of the connective tissue in biliary cirrhosis depends upon its formation around the new-formed bile ducts, and in the spots where areas of necrosed liver cells have disappeared through time. Here and there, one may notice a regeneration of liver cells, as indicated by an increase in the number of cells and their nuclei.

Often flattening of cells from pressure is observed; also atrophy and a yellow coloration, sometimes intense. In biliary cirrhosis the liver is enlarged only at the beginning of the morbid process, because then the connective tissue has not become cicatricial, or contractile, and atrophy of the cells has not advanced far. On the other hand, much later, as cell atrophy goes on more and more, and the interstitial tissue becomes more and more contractile, a remarkable diminution in the size of the liver is noted.—*Rev. Intern. de Bibliog. Med.*

ABSCESSES FOLLOWING TYPHOID FEVER.

M. Melchior gives the history of a boy eleven years old who, after typhoid fever, was attacked by a peculiar form of abscesses. They began

to develop during the first week of convalescence, and healed after three months. Six months later new abscesses appeared on the left calf and the anterior face of the right tibia. They developed very slowly, without pain or symptoms of inflammation, healed very slowly, and showed a tendency to reopen; they contained a thin, reddish pus, without special odor. From the pus Melchior cultivated short bacilli with rounded ends, resembling the bacilli of Eberth. The author has made a long series of experiments in order to ascertain whether they really were the bacilli of Eberth, or a species of bacilli resembling these; as, for instance, the bacterium coli communis. By cultivating bacterium coli communis in milk, the milk becomes solidified; when the bacterium coli communis is cultivated in bouillon containing two per cent. of milk-sugar and some chalk, lactic acid is produced, and, by its action, carbonic acid is liberated. The experiments showed that the bacilli found in the abscesses neither solidified milk nor changed milk-sugar into lactic acid. By cultivating these bacilli on agar colored by means of litmus, the colonies were not surrounded by a red halo, as occur with the bacterium coli commune. In short, they gave all the reactions of the true bacilli of Eberth, and the author therefore believes that the bacilli of Eberth may remain for a long time in the body after typhoid fever, and provoke inflammations of a specific kind.—*Hospitals-Tidende, 1892, p. 1021.*

THE BACILLUS OF INFLUENZA IN THE BLOOD OF LIVING PATIENTS.

V. P. Canon examined a large number of preparations of blood taken from patients ill with influenza of a severe type. He stained with eosin-methyl blue, and found in most cases small bacilli which were identical with those of Pfeiffer. In many instances the bacilli were noticed in small heaps; in some singly, and few in number. Using Gram's method, the germs were not stained. The investigator inoculated glycerine-agar plates with the blood, and obtained pure cultures, although the number of colonies on a plate was generally small. The urine as well as the blood was examined, and, amongst other organisms, small rods were found which were apparently identical with those of influenza. Further experiment with these is necessary, however, to establish their identity. Examination of the sweat gave a negative result.—*N. Y. Med. Monatschrift.*

MICROSCOPIC DRAWING.

Place the body of the microscope horizontal; remove the mirror; put the slide on the stage; condense the light upon it by means of the bull's-eye, taking care to centre the light; attach the concave mirror to the front of the eye-piece by means of a spring or a piece of thin wood. Have its surface at an angle of forty-five degrees with the plane of the anterior glass

of the ocular. This will project an image of the object on the paper beneath. If the outer ring of light is circular, there will be no distortion. With a black cloth exclude all outer light, covering both your head and the instrument. Mr. Hopewell Smith draws any section easily in this manner, including magnifications of 600 diameters.—*Scientific American*
J.A.A.

THE CONTAGION OF MUMPS.

(1) The duration of the period of incubation in mumps is, in the majority of cases, from eighteen to twenty-two days, but may vary from eight to thirty days.

(2) Mumps is contagious, especially during the period of incubation, but is transmissible after cure for a period as yet undetermined.

(3) The blood and fluids extracted from the parotid and the testicle contain a special microbe, which appears to be pathogenic, but the negative results of inoculation upon animals hold this point in abeyance.

(4) The angina and swelling of the sub-maxillary glands constitute at times the initial manifestations of the disease.

(5) In certain cases of metastatic orchitis, the local tumefaction begins with an epididymitis.—*Le Courrier Médical*.

LAVERAN OF THE MICROBE OF MUMPS.

Previous work by different observers has resulted in very conflicting testimony upon this point. Laveran has examined the fluid withdrawn by capillary punctures from the parotid glands of patients affected with mumps. He has also made similar punctures in the testicle when metastatic inflammation has resulted; and has made several examinations of the blood, and one of the serum coming from an acute edema. Cultures from the parotid fluid have been positive in nine out of fourteen cases, from the testicular in three out of six, from the blood in four out of seven, and in the serous also a positive result was determined. There has always been found a certain microbe resembling a diplococcus, and generally the cultures have been pure ones. Laveran does not, however, care as yet to declare a causal relation between this particular germ and the disease.—*L'Union Médicale*.

MICRO-ORGANISMS IN TYPHUS EXANTHEMA.

MM. Curtis and Combemale, of Lille, report that they have always failed in attempts to cultivate organisms from the blood of typhus patients. On the other hand, the spleen and the ventricular fluid gave cultures upon serum-agar, and in bouillon at 37°. These cultures are made up of extremely small cocci, generally occurring as diplococci.—*Le Progrès Méd.*

Editorials.

THE MEDICAL COUNCIL AND ITS SUPPORTERS.

IN correspondence which has recently appeared references have been made to THE CANADIAN PRACTITIONER which are, to a certain extent, misleading. This journal has always supported the council in a general way, but has not approved of all its acts. We think it has raised the standard of medical education, it has framed an admirable curriculum, and it has done much to discourage and abolish quackery. These are matters of such paramount importance that they are worthy of consideration even by those who attack the council for alleged mistakes in other directions.

In the early days of the controversies between the two parties our sympathies were with the council, largely because we feared that the existence of that body was seriously imperilled. We endorsed the position taken by Dr. Williams—at that time the president—who conducted his case with considerable ability. When the representatives from the two sides appeared before the committee in the Legislature, it was generally recognized that the Defence Association had a strong support in the house. Probably a majority would have voted for Dr. Meacham's proposed amendments. The matter was postponed for a year to give the council a chance to act. A grand opportunity was thus afforded that body to do something to conciliate its enemies. The leader at that time was, unfortunately, Dr. Williams, who showed singularly bad judgment in practically defying the Defence Association. The members of the council appeared to think it was their duty to stand by their retiring president, and decided to concede nothing. It is true that a committee was appointed to confer with the Defence men; but, after the unanimous endorsement of the fiery address referred to, this amounted to very little. Of course concessions were afterwards offered under the presidency of Dr. Fowler, but they came too late.

For the benefit of some who do not assume a decidedly unfriendly attitude toward this journal, but, at the same time, speak of THE PRACTITIONER as one of the journals which has "always supported the council," we desire to quote from our first issue after the meeting of the council in 1892, as follows: "This (the resolution before referred to) is well enough as far as it goes, but it comes far short of what was expected. The desires and objects of the supporters of Dr. Meacham's proposed amendments to the Medical Act, which was introduced in the Ontario Legislature at its

last session, are well known to the members of the council, and yet they do not consider it worth their while to express their opinion on any one point raised. We are entirely opposed to many features of Dr. Meacham's bill, but we cannot shut our eyes to the fact that it contained certain clauses which are strongly supported by a large and powerful section of the profession in Ontario. We may go further—that the present constitution of the council is not just and fair in the interests of the general profession. The numbers of school men are far in excess of what they should be when compared with the numbers of the territorial representatives. This fact is simply incontrovertible, and well known to the council; and yet its members had not backbone enough to take the question up, discuss it intelligently, and express an opinion on it. The council may as well recognize the fact that the Medical Defence Association includes a number of strong men, such as Drs. McLaughlin, Coburn, Sangster, Armour, Eastwood, and many others, who are enthusiastic, united, and thoroughly in earnest. The do-nothing policy may stem the tide for a short time; but a more manly and dignified attitude is necessary to avoid defeat, if not disgrace, in the near future."

Our various comments during the ensuing year were based on the same line of argument, and our forecast of the amendments that were likely to be adopted was substantially correct. We desire to give the council full credit for the good work it has done, and to be charitable wherein it has failed to give general satisfaction. We believe it contains many able and high-minded members, who have been conscientious and faithful in the performance of their duties. At the same time, it contains a few that can well be spared, and this fact is so palpably self-evident and generally recognized that extended discussion is needless.

THE POSITION OF THE MEDICAL DEFENCE ASSOCIATION.

WE publish in full in this issue the latest manifesto issued by the Medical Defence Association of Ontario, as it appeared in the *Toronto Daily Mail*, July 28. The able secretary of the association has published many communications during the past year, but the majority have been characterized by such bitterness that they have not always been pleasant or profitable to read. The last letter, however, has no such faults. It is clean-cut, concise, slightly severe, but, on the whole, correct in its statements.

It would be unfortunate, if it were true, that a lay paper "is the only unobstructed avenue of success" to a large and influential organization in our profession. We hope, however, that before long the independent

medical journals of the province will be considered the most suitable organs for the discussion of all subjects affecting the vital interests of the medical profession. It may be unfortunate, or otherwise, that *THE PRACTITIONER* has not satisfied either party in the conflict of the last two years, but it does not necessarily follow that it has gone far wrong. Whether our comments be correct or not, we wish it always to be understood that our columns are open to all parties who will discuss medical questions on their merits, without indulging in offensive personalities.

We have before commented on certain changes in the amended Act, referring to the increase of the territorial representatives, and the restrictions in the functions of the school men. While we have no objections to make to Dr. Sangster's interpretation of these particulars, we regret the spirit which has inspired clause 9 of the circular. We consider that no sect or locality of physicians has any rights respecting examining boards. In all cases the best men should be appointed, regardless of all other considerations. It must be remembered that in some subjects, especially, the numbers of physicians fit to examine are exceedingly small. The council had trouble enough many years ago, but in recent years has made excellent appointments, without any regard to sectional desires or jealousies. Now, Drs. Fulton and Henry want to see the rights and privileges of the territorial divisions respected, and, more, that the "examiners from these divisions should be appointed in regular succession, an eastern or a western man, either alternately or together." Does the Defence Association wish to assist in restoring one of the most pernicious customs which the council has ever known, a custom which has produced in the past a considerable amount of log-rolling, and frequently the appointment of incompetent men as examiners?

We are glad to notice the courteous tone of Dr. Sangster towards Dr. Fowler, whom he terms "the respected ex-president" of the council. We believe that gentlemen is well entitled to the respect of all parties for his wise and judicious course during his year of office. We cannot discuss at length other portions of the letter; but we must express regrets at the references to the schools. As the powers of the educational representatives are curtailed, surely a dignified silence on the subject would not have been out of place? We also regret that "aggressive action" on the part of the association is apparently only postponed. Why not accept the amended Act as it stands, and settle on new matters of dispute that may arise in the new "parliament" that will assume control after the next election?

Of course, it must be understood that Dr. Sangster's letter is worthy of careful consideration, not simply because of the ability of the writer, but chiefly because he speaks for an organization which includes something like half the profession of Ontario.

Meetings of Medical Societies.

HURON COUNTY MEDICAL ASSOCIATION.

The regular meeting of the Huron County Medical Association was held at Seaforth on July 11th.

MORNING SESSION.

Dr. Wood, president, in the chair.

Dr. Lachlan, of Auburn, presented an interesting case of scrofula. Young lady, aged 14, with enlargement of cervical glands, one of which had suppurated. On examination no evidence of pulmonary disease was noted. The treatment had been the administration of tonics, nourishing diet, with good hygienic surroundings. A prolonged discussion followed in regard to the treatment of such cases, Drs. Campbell, Amos, Wood, Stanbury, and Smith giving their experiences, with reports of similar cases.

In answer to a question, the president stated that, in his opinion, such cases should be advised not to marry on account of the large number of tubercular cases which bear evidence of being hereditary.

Dr. Campbell reported a case of eclampsia in a patient pregnant for the eighth time; pregnancy was advanced to the seventh month. Had seen patient immediately after the first convulsion; in eight hours another severe convulsion occurred. Urine highly albuminous; administered one-eighth grain elaterium, with hydrate of chloral by rectum. Resolved to produce premature delivery; for this purpose proceeded to dilate the os uteri. This was gradually accomplished, and in a few hours patient was delivered of a living child. No convulsions after delivery. A short discussion followed on the treatment of puerperal eclampsia.

Meeting adjourned at 12.30 till afternoon.

AFTERNOON SESSION.

Dr. Smith presented the report of the special committee on legislation regarding the action of the committee in the matter of recent changes in the Medical Act, and suggesting that the thanks of the association be tendered Mr. Garrow, M.P.P., and other members of the Legislature from Huron, Bruce, and Perth, for their assistance in obtaining the recent beneficial changes in the Medical Act. Report adopted.

Dr. Amos gave a sketch of a case of hematuria in a pregnant woman two weeks before confinement; repeated bleedings occurred, owing to negative evidence. Kidney disease was excluded from the diagnosis, and a vil-

lous or papillomatous growth was regarded as the cause of the hemorrhage. Bleeding continued till some time after confinement, when it ceased.

Dr. Graham would hesitate in making a diagnosis without more knowledge of the case.

Dr. Smith suggested the possibility of a malarial cause; also relating history of a similar case, in which death revealed the cause as due to malignant disease of the bladder.

Dr. Eccles had examined the urine in Dr. Amos' case, but was unable from this to determine the source of the hemorrhage. In villous growth he thought the blood would not likely be so intimately mixed with the urine as if it came from the kidney. Dr. Elliott thought it difficult to make a diagnosis from the symptoms given, but thought washing out the bladder might be of use in diagnosis.

Dr. Bethune related a similar case in a pregnant woman, in which he curetted the bladder and removed a growth diagnosed to be villous.

Dr. Campbell presented a case of vascular growth on the face, treated by electrolysis with good results; treatment still going on. Also presented a case of obstinate intercostal neuralgia in a man in which quin. sulph., grs. x., given at bedtime, with Gross' pill in daytime, gave good results.

Dr. Campbell also presented notes of treatment of a case of uterine antifixion with cervical stenosis. Hayden's viburnum compound was first tried, with no benefit. Next scarified the cervix, using glycerine tampons, with injections of hot water; no improvement. Next dilated the uterus, packed with iodoform gauze; as the symptoms were in no way abated, tried applications of electricity, but so far with indifferent results.

Several members of the association testified to the correctness of the methods of treatment employed in this case, but all agreed as to the very unsatisfactory results of treatment in cases of dysmenorrhea from this cause.

Dr. Eccles thought the cause of pain in these cases frequently due to an imperfectly developed condition of the structures of the endometrium.

Dr. Eccles, of London, read an intensely interesting paper—five consecutive cases of fibro-myoma, with operation. These cases were of intense interest, as serving to illustrate some of the rarer forms of the disease, and also the difficulties in making a diagnosis previous to exploratory incision.

Dr. Taylor made some remarks on the treatment of fibroid disease by ergot.

Dr. Eccles said ergot was useful in the multinodular myomata, but was of no value in the rarer form of edematous fibro-myomata.

Dr. Graham asked Dr. Eccles' opinion as to the value of electricity in the treatment of fibroid. Dr. Eccles testified to the value of the current in restraining hemorrhage, but was skeptical as to its value in causing a disappearance of the growth.

Moved by Dr. Graham, seconded by Dr. Taylor, that the thanks of the association be tendered to Dr. Eccles for his attendance, and for his very valuable and interesting paper; also that Dr. Eccles be elected an honorary member of the association. Carried.

Moved by Dr. Smith, seconded by Dr. Campbell, that the secretary present to the secretary of the Chicago Medical Society the credentials of Dr. Elliott as a member in good standing of the Huron Medical Society. Carried.

On motion of Dr. Smith the association adjourned, to meet in Clinton in October.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—I regret to notice, in your July number, several errors (page 546) in your report of the paper on "Bromoform."

In the first place, the report says: "It (bromoform) unfavorably influenced the general condition of younger children." Such is not my opinion; indeed, from all I have seen, its influence is favorable. Second, the report says: "Some . . . found pot. brom. and chloroform to do better." I did not state so; in fact, I know of no person of that opinion. Lastly, it is stated that in one case a patient took a fatal dose of the drug. So far from this being the case, Mr. Editor, I have yet to learn of a fatal case in the use of bromoform as a medicine.

Toronto, July 28th, 1893.

J. T. DUNCAN.

BRITISH COLUMBIA MEDICAL MATTERS.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—In the last number of THE PRACTITIONER, Dr. Milne, in reply to our joint letter appearing in a previous issue of the same journal, says: "In this province nominations of candidates are not made officially or otherwise, and Drs. Praeger and Wade are cognizant of the fact." Exactly so! That is the point! That is the precise ground we took in our letter, and it was to the breach of this custom by Dr. Milne that we took exception.

Dr. Milne denies having issued any list of names of candidates, stating that he simply gave a list of names in answer to a private communication; but the following extract from a letter written by another candidate to the

undersigned scarcely bears out Dr. Milne's disclaimer: "I quite agree with all you say, and think your letter to Milne very moderate in tone. I would sign it, only I have already written a strong expression of opinion. Milne answered me, and said he sent a list of candidates he 'heard' were in the field. He also told me he sent a fresh voting paper, and a withdrawal of the semi-official list. I have little doubt but that the election is entirely illegal, and could be upset by a more formal objection." This gentleman, it appears, had exactly the same grievance against the registrar, and protested against his excess of zeal independently of us, and long before the case referred to in our letter was brought to his notice.

Dr. Smith's report, and his eulogium of the council and its registrar, is no doubt very nice and comfortable; but has no bearing on the point at issue, and is of no interest to any one—unless it be the registrar.

Yours truly,

E. A. PRAEGER,
MARK S. WADE

Victoria, August 4th, 1893.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—Since posting you the joint reply of Dr. Wade and myself to Dr. Milne's letter in your journal respecting the recent election of the British Columbia Medical Council, I am in receipt of *The Ontario Medical Journal*, which also contains a letter from Dr. Milne, but one differing very widely in its tone from that he sent you.

I trust that you will favor me with space to remark on this. Having referred you to the very servile apology of the editor of that journal, who evidently feels proud of being "under the control of the Medical Council of the Province of British Columbia," and who further states that "to avoid all further trouble we will send all communications to Dr. McGuigan to be revised," I trust I shall have said enough to convince you that it is impossible for me to address any remarks to or take any cognizance of so narrow-minded an organ.

Dr. Milne says he has already answered us in THE PRACTITIONER. In that letter Dr. Milne practically admits the truth of the charge we brought against him, though he tries to dispose of it with a rather lame excuse (to the truth of which I hardly think he would venture to swear), for as time goes on more cases are coming to our knowledge in which the registrar furnished a list of candidates. Thus either Dr. Milne's excuse is not founded on strict facts, or, what is almost as remarkable, the instances in which he had to exhibit his courtesy by giving advice were more numerous than he has taken credit for. It is also rather astonishing that the list of names furnished by Dr. Milne contained only those of a caucus.

Our contention is that when asked who were candidates (as he says he was, by one practitioner), it would, to say the least, have been in better taste for Dr. Milne, remembering that he is the holder of a quasi-public office and practically the returning officer at the election, to have replied that every registered practitioner was eligible as a candidate, and that consequently no official list could be furnished. This would certainly have been more honorable than endeavoring to secure the election of a caucus. I join issue with Dr. Milne on his statement that he only sent the list to *one* practitioner in response to a private letter. However, as it is within the bounds of possibility that this part of the subject may yet be tested in the Supreme Court, and that Dr. Milne may have the opportunity of obtaining the opinion of a disinterested party on his action, I will not take up your space by arguing this point further.

I want, however, to call your attention to Dr. Milne's covert threat, that "were it not for taking up too much of your valuable space (*The Ontario Medical Journal*, under the control of the British Columbia Medical Council) I would show the ridiculous position these men take in endeavoring to advertise themselves." I learn for the first time, sir, that writing a letter to a medical paper is advertising. I am glad, indeed, to note that Dr. Milne has (apparently) at last adopted a high code of ethics, for, if my memory does not serve me very false, Dr. Milne about this time last year used a *lay* paper for the purpose of discussing a medical question, and attacked a prominent member of the profession in this province in an undignified manner, and, in effect, successfully *advertised himself* out of his position as health officer. I repeat that I rejoice to think that the registrar's views have now undergone such a change as to make advertising no longer compatible with registration; but has he not now gone to the other extreme?

Dr. Milne says it is only the work of a "few disgruntled and disappointed men who imagine that he is the Medical Council," etc. Now here, again, I join issue with him, and say that I have not for one moment considered him the whole council. My anxiety is that he should be made to understand very clearly that he is not, but that while he remains an officer of that body he must behave with something like decorum. Dr. Milne should have abstained from making charges of exaggeration and misrepresentation, for frequently, like a boomerang, they come back to the person himself. Dr. Milne should at least have allowed the events of 1892 to be forgotten before he makes charges of this nature against others. Dr. Milne should have borne in mind that the point at issue is confined to very narrow limits, *i.e.*, whether he intentionally or otherwise misused his official position for the purpose of securing the election of himself and a caucus to work with him? and that no amount of abuse or insinuations

from him can answer that question, even though written to a journal "under the control of the British Columbia Medical Council."

Dr. Milne says that we are "disgruntled (whatever that may mean) and disappointed men," and infers that we should not be listened to. The only sense in which I am disappointed is that the registrar should have degraded his office, as he undoubtedly has done.

It must be very soothing to his feelings to be whitewashed by the president of the council, but I do not imagine the profession generally will attach much weight to the opinions of the council; none of its members, with one exception, having succeeded in obtaining any favorable notoriety outside of their own small cities.

I imagine that as soon as the profession here becomes alive to the fact that *The Ontario Medical Journal* is muzzled for the benefit of the British Columbia Medical Council, we shall have to look elsewhere for paper for starting our fires. Mine has always come wrapped up in a "goody-goody" Sunday-school paper (probably to meet the wishes of the British Columbia Medical Council), and has been handed to my Chinaman for fire lighting, but he has simply shrugged his shoulders and tossed it aside, saying, "Not muchee good, I tink."

E. A. PRAEGER.

Nanaimo, B.C., August 14, 1893.

(From the *Toronto Mail*, July 28th, 1893.)

TO THE MEMBERS OF THE MEDICAL DEFENCE ASSOCIATION.

GENTLEMEN,—I have been instructed by the executive of our association to report to you through the medium of the press—which is the only unobstructed avenue of access to you, at present, within our reach—the results of our first year's operations, and, especially, the issue of our efforts to secure such amendments to the Ontario Medical Act as seemed to be desirable in the interests of the profession. As you will observe, the changes in the law which were sought for, and procured, bear almost exclusively on the constitution and powers of the Medical Council. They are briefly as follows:

(1) We have changed the basis of representation in the council and increased the profession's contingent therein from twelve to seventeen members—the other elements remaining as before.

(2) We have secured the suspension of both the assessment and the coercive clauses of the Medical Act, and this—not merely by the grace of the Medical Council and during its pleasure—but by Act of Parliament, and in a form practically equivalent to their repeal.

(3) We have secured from the Legislature a full and explicit recognition of the principle—for which we were mainly contending—that “there shall be no taxation of the profession except by its own representatives.”

(4) We have secured an enactment giving to the elected members of council, and to them alone, the power of deciding whether the suspended clauses shall forever remain inoperative or not. Moreover, should these at any time, or on any special occasion, decide to levy a money contribution on the profession, they have the sole power of determining the amount (within the limit of an annual \$2), the conditions on which they agree to assess it, and the mode of its collection.

(5) By securing the exclusion of the appointed members of the council from all interference with the assessment or collection of professional taxes, we have merely restricted their functions. Moreover, having conceded to us the principle which this involves, the Legislature must inevitably, as soon as the matter is pressed on its attention, equally exclude them from any vote on questions involving the expenditure of professional funds.

(6) We have shortened the council's term of office to four years, and, by securing a new election in 1894, we have had the present council dismissed one year before its appointed time.

(7) We have removed from the council the power of playing fast and loose with the electorate in regard to notices of territorial elections. The registrar is hereafter constrained to notify, by letter or by postal card, every practitioner in the province of an impending election not less than forty, nor more than sixty, days prior to the date of receiving nominations.

(8) The council can never again repeat the procedure practised on Dr. Shaw and Dr. Sioan, or in any way settle disputed elections to suit its own views, since these are henceforth subject only to judicial decision.

(9) By increasing the number of the profession's representatives on the Board of Examiners, we have broken what almost amounted to a monopoly of these appointments by the schools. We have now restored the rights of the profession in this respect.

(10) We have, as a result of the whole, rudely disillusioned the Ontario Medical Council of its pet fancy, that, in its present composite form, it can successfully pose as the “Parliament of the Profession,” or the “Representative Body of the Profession,” and, in that capacity, persuade the Legislature not to give effect to any medical measure or enactment except such as are initiated or endorsed by it.

Although in our bill we ask for the exclusion of all appointed members from the council, we had agreed, as a compromise, before it was sent to committee, to the retention of the four university representatives, but we were led to expect that the functions of these should be strictly limited to

matters of curriculum. Section 6, Sir Oliver Mowat's substitute for our proposition, is not distinctly so restrictive, but, besides giving us much, it obviously contains the germ of all we asked for, and the full development of this is only a matter of time.

It will be thus seen that the Medical Defence Association has already engraved its mark broadly and deeply, and, we trust, also beneficially, on the medical legislation of Ontario. Notwithstanding the opinion ventured by the respected ex-president of the council, that the Legislature had refused to make radical alterations in the law, we think that the amendments secured are so vital in character, and so far-reaching in effect, as to strike to the very root of the council's constitution. Though not quite prepared to accept the changes obtained as a settlement in full of our claims, we are eminently well satisfied with the results of our first year's efforts. We have won a great victory over a very powerful array of hostile forces, and we feel that we can honestly felicitate ourselves and our association on the brilliant success of the campaign, and also congratulate the profession at large on the happy removal of the main causes of irritation and strife heretofore producing dissension in our ranks. We gratefully acknowledge our deep obligations to the Ontario Government and to the Legislature for the patient hearing given to our complaints, and for their impartial and enlightened endeavors to remove the worst of our grievances, as far as these were within their reasonable control.

I am further directed to state for your information, and also in order to allay the solicitude developed in the Medical Council during its recent meeting as to the numerical strength of our association, that our enrolled membership now numbers 1,129. Of the printed post-cards issued by us to the profession, only 1,226 were returned; 1,136 came back dated and signed, and in nearly every instance answered affirmatively as to each question, and in every case answered "yes" as to the first and last questions. These names were enrolled. The remaining ninety, though answered "yes" in many instances as to some of the questions, were, through being unsigned or blank, or negative as to the essential questions, counted against us. One gentleman in the county of Lambton has since withdrawn his name without assigning any reason. Of the sixty-two gentlemen in Toronto who joined our association, six subsequently wrote to ask that their names be erased from our lists, in every case professing continued sympathy and agreement with our movement, but declining—as did a number of others in Toronto, who did not return the cards at all—to be publicly identified with us because of "the intensely bitter feeling manifested by the men connected with the medical schools towards all persons sympathizing with the association." These seven withdrawals are all that we have any knowledge of. I may further add, for the solace of those

concerned, that the returned cards were taken to Toronto, and carried to the House, under the impression that the committee might ask to examine them. No request to that effect being made, they were the following morning submitted to the inspection of Dr. Angus McKay, M.P.P., of Ingersoll, who was invited to examine them, and was at liberty to count them had he been so inclined.

As explained in our circular, last January, the "mission" of the Medical Defence Association will not be fully accomplished until the Medical Council shall have been made strictly elective and representative. Until that end is secured, it will not cease to exist. There is no longer, however, immediate need for aggressive action on its part. It has obtained very large concessions from the Legislature, in the removal or the mitigation of the evils of which it complained, and for a time, at least, it may profitably content itself with an attitude of alert watchfulness. The legislation it has secured is, at once, an evidence of its power and a pledge to the profession of the purity and integrity of its aim. It will now, therefore, lie comparatively dormant until occasion arises for its further active interference. Means will be found to secure the full discussion of the issues involved in the elections of next spring. Meanwhile, the executive beg you individually to remain true to the cause you have espoused. The ultimate independence of the profession is assured if we stand to our guns. It is hoped that in your respective neighborhoods you will be centres of intelligence as to the moderation and justice of our claims. Many of our professional confrères are not with us, because they have given little or no thought to the matters in dispute. Not a few are opposed to our contentions because they are not yet fully emancipated from habits of mental subordination, contracted during attendance at college. Perhaps a still larger number side with the educational bodies in return for favors received, or in anticipation of favors to come. It is deplorable that so many medical men in our province are moved by sympathies and influences that are extra-professional, and are thus led to lend themselves to the furtherance of the selfish ends of the schools. The school and university examinerships, by means of which these institutions have systematically sought to secure extraneous support, have, because of the aim and manner of their distribution, long since ceased to be a distinction, and, by sensible men, can scarcely any longer be regarded even as a compliment.

JOHN H. SANGSTER,

Secretary Medical Defence Association.

Port Perry, July 24th, 1893.

Book Reviews.

- REPORT TO THE COUNCIL OF KING'S COLLEGE, London, on the Bacteriological Department, from Prof. Crookshank.
- CREMATION AND ITS IMPORTANCE IN CHOLERA. By Robert Newman, M.D., New York. Reprinted from *The Sanitarian*.
- GALLACETOPHENONE, a new dermato-therapeutic agent. By Dr. Hermann Goldenburg, New York. Reprinted from *New York Medical Journal*.
- THE PREVENTION AND CORRECTION OF DEFORMITY OF HIP DISEASE. By B. E. McKenzie, B.A., M.D., Toronto. Reprinted from the *Canada Lancet*.
- PRACTICAL DETAILS IN THE PREPARATION OF PLASTER OF PARIS BANDAGES. By Dr. H. Augustus Wilson. Reprinted from Philadelphia Polyclinic.
- ON THE RELATION OF ECZEMA, WITH DISTURBANCES OF THE NERVOUS SYSTEM. By Dr. L. Duncan Bulkley, A.M., M.D. Reprinted from *The Medical News*.
- CLINICAL STUDY OF AN ANALYSIS OF 1000 CASES OF PSORIASIS. By L. Duncan Bulkley, A.M., M.D., New York. Reprinted from *Maryland Medical Journal*.
- THE INTERNAL TREATMENT OF LUPUS ERYTHEMATOSUS WITH PHOSPHORUS. By Dr. L. Duncan Bulkley, A.M., M.D., New York. Reprinted from *The American Journal of the Medical Sciences*.
- FREE INCISION OF ABSCESS OF OSTITIS OF HIP ; closure without drainage. By H. Augustus Wilson, M.D., Philadelphia. Reprinted from Transactions of the Philadelphia County Medical Society.
- THE PRESENT STATUS OF ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURES. By Robert Newman, M.D., New York. Reprinted from the *Journal of the American Medical Association*.
- EXTRACTION OF STEEL FROM THE INTERIOR OF THE EYE WITH THE ELECTRO-MAGNET. By Dr. Ahern A. Hubbell, Buffalo. Reprinted from the Transactions of the New York State Medical Association.

Medical Items.

DR. CHAS. W. COVERNTON, who has been in England for some time, returned to Toronto, August 5th.

PROFESSOR OSLER, of Baltimore, spent a couple of weeks in Toronto, and left for Montreal and the White Mountains, August 10th.

DR. CHARLES B. PENROSE has been elected professor of gynecology in the University of Pennsylvania, in the place of Dr. Goodell, resigned.

DRS. IRVING H. CAMERON and GEO. A. PETERS left Toronto, July 21st, to attend the meeting of the British Medical Association in Newcastle-on-Tyne.

THE annual meeting of the Dominion Medical Association will be held in London, September 20th and 21st, under the presidency of Dr. Chas. Sheard, of Toronto. A very interesting programme is expected.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The third annual meeting of the American Electro-Therapeutic Association will be held in Chicago, September 12th, 13th, and 14th, at Appollo Hall, Central Music Hall Block.

DR. WILLIAM GOODELL, professor of gynecology in the University of Pennsylvania for many years, has resigned. The trustees accepted his resignation "with regret," and elected him honorary professor of gynecology, with the right of lecturing.

DR. EDWARD FARRELL, of Halifax, in a letter to the *Maritime Medical News* respecting the Johns Hopkins Hospital, of Baltimore, says: "In the medical department the Canadian visitor feels at home, for it is in charge of our distinguished fellow-countryman, Dr. Osler, late of Montreal. One cannot help feeling proud of the honor he reflects upon the profession in Canada by the splendid reputation he is making in his new field of labor."

WE have much pleasure in announcing that Dr. J. E. Graham, of Toronto, has passed the examination for M.R.C.P. Lond. He passed his final for M.B. in the University of Toronto in 1870, went to England and passed for L.R.C.P., London, in 1871. Since he commenced practice in Toronto he has steadily forged to the front, and is now well known in Canada, and other parts of the world, as a writer and teacher of medicine, and also as an able consulting physician. His numerous friends will rejoice at the distinction he has attained in becoming a member (by examination) of the Royal College of Physicians of London.

DR. WILLIAM WHITE, in his recent article on the late Dr. Agnew, relates the following incident: Sir Joseph Lister once told me that during his very early days in Edinburgh, when he was still uncertain whether to remain there or to begin his work elsewhere, he consulted Mr. Syme. The latter told him that he would probably do well to stay there, but remarked that it really seemed as though there were not much left to do in the way of advancing surgical science, little thinking at the time that the young man he was talking to, his future son-in-law, would, almost alone and unaided, effect the greatest revolution in surgery, and bring about the greatest step in advance which has been made since Harvey discovered the circulation of the blood.

DR. WILLIAM WHITE (*University Medical Magazine*) relates the following anecdote respecting the late Dr. Agnew: A man residing in Williamsport had half swallowed his artificial denture, which became impacted in the esophagus. He was sent down to Dr. Agnew, who met him at the Colonnade Hotel and extracted the plate. An enterprising reporter who heard of it rang Dr. Agnew's bell at one o'clock the following morning. Mrs. Agnew, who often interposed between her husband and unnecessary demands upon his time and strength, spoke to the visitor from the window. He said he had learned that

under the original plan. The operator stands to the left of the patient and presses the thumb deeply at a point midway between the apex beat and the edge of the sternum, repeating the process about 120 times a minute. Almost at once the dilated pupils contract, and the presence of an artificial carotid pulse can be felt. After a time spontaneous respiratory effects are noticed, which are the signal for discontinuing the pressure and the artificial respiration, so long as the contraction of the pupils is maintained and the respiratory effects do not again cease.—*West Medical Reporter*.

As a fitting sequence to the above editorial comes the following, in a later number of the same journal :

"OPERATING UNDER GLASS.—Some surgeons, especially those abroad, whose antiseptic technique has reached such a fine state of elaborateness, will probably be glad to hear that quite a novel suggestion has just been carried out to keep lively germs from feasting in wounds made by operators. We learn that the faculty of medicine at Madrid have just inaugurated a new antiseptic operating theatre, to which the cognomen 'Quirofano,' or 'Transparent surgery,' has been given. The principle is novel. The spectators are separated from the patient and the surgeon and his assistants by a wall of glass, through which it is possible to follow the details of the operation and to hear the remarks of the professor. Everything, saving what is absolutely necessary, is, by this means kept isolated from the patient. Before very long, perhaps we shall hear of operations being done under glass; that is to say, of every ideal operating theatre being provided with a glass chamber fixed in the centre of the floor—a sort of antiseptic conservatory, where the surgeon and his assistants can shut themselves in with the patient until the operation is completed. The transcendental antisepticism of some antiseptic enthusiasts is apparently illimitable, but there are grounds for astonishment that this latest antiseptic novelty should have originated in Spain, where, judging from past experience, the antiseptic treatment of wounds has never been much in vogue."

Superficial show seems to take the place of depth of mind and common sense in these later days. After the ovary craze came the appendix craze, and now it seems as if we were drifting into a craze for stitching movable kidneys. What next?

BREVITY IN MEDICAL LITERATURE.—In an editorial in the *Medical Press* you will find the following: "Attention has recently been drawn to the want of condensation in medical articles. A physician has to report a case or read a paper at a medical meeting, and he too often thinks that he will be heard for his much speaking, and feels dissatisfied if his contribution to medical science has not occupied at least half an hour in the reading. We find the chaff round the proverbial grain of wheat in more than usual abundance in those who commence their paper with numerous extracts from text-books and a wearisome statement of details of the case, and compliments to those who saw the case, from the clinical clerk and the trained nurse to the distinguished colleagues who fully approved and coincided with the treatment of the case by the eminent physician who elaborated the paper. Hardly worse is the brilliant operative surgeon who gives the regional anatomy

of the part operated on and commences to tell the many different ways he might have treated the case, and the comparatively poor results which would have followed any plan but that adopted by him with intuitive surgical acumen. Antiseptics furnish abundant material for padding. He tells of the relative merits of the discarded ones and the surprising advantages of the latest synthetic drug from Hamburg. He revels in antiseptics, they intoxicate him, and his garrulity and verbosity find scope in describing how he sterilized himself, his clothes, his instruments, his operating theatre, his patient, his attendants. Ligatures, vegetable, animal, and metallic, have likewise gone through the burning fiery furnace, and all must be recounted. The paper proceeds with a glowing account of how, thanks to the antiseptic dressings and antipyretic remedies, the temperature never rose above normal, but that, unfortunately, owing to some inherited delicacy, the patient succumbed, and the specimen exhibited is a complete proof of the diagnostic power, skill, and so forth of the surgeon, and an undoubted evidence of the value of antiseptics, antipyretics, and all such modern remedies, and in every sense conclusive that we have attained to perfection, and that we are in the golden age of medicine. Cannot a paper, telling a plain story without garnishing of text-books, anatomical details, or such information as all decently educated medical possess, be read and published? It would tend to spread information, make journals less bulky and more readable, and altogether benefit medicine."

THE INTERNATIONAL MEDICAL CONGRESS.—From Rome, under date the 17th ult., *The Lancet's* correspondent writes: "There can now be no doubt that in point of numbers alone, to say nothing of the importance of the monographs which were announced in my last communication as being expected from such *dii majorum gentium* of medicine as Virchow, Charcot, and Nothnagel, the coming congress will be superior to the most frequented of its ten predecessors. In the first place, take Italy herself. There are about 20,000 possessors of medical diplomas in the peninsula, and of these it is safe to assume that no fewer than one-fourth will make an appearance at the sections. To these 5,000 Italian medical men may safely be added the 3,000 practitioners and teachers of other nationalities who are already pledged to come, to say nothing of the fact that 'adesioni' to the number of 3,000 more are all but committed to be present. Allowing for abstentions and 'false starts' due to unforeseen causes, which affect no profession more than the medical, we may deduct 1,000 from the 11,000 thus compiled, and the balance of 10,000 'Congressionisti' remains—a total exceeding by more than 4,000 the attendance at the Berlin Congress in 1890. It is, I find, from Germany that the majority of the foreign participants at the sittings will come. Certainly, there is nothing of that international jealousy between Italy and the two other members of the Triple Alliance that caused French representatives to be 'conspicuous by their absence' at the Berlin Congress. America also, both from her northern and southern divisions, will send many delegates—the physicians and surgeons of the United States especially."

A cable despatch from Rome, dated August 2nd, reports that the congress has been postponed until April next by reason of the prevalence of cholera.—*Medical Record*.

THE CANADIAN PRACTITIONER

EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

THE MECHANICAL TREATMENT OF TUBERCULAR DISEASES OF THE KNEE.*

By B. E. MCKENZIE, B.A., M.D.,

Lecturer on Orthopedic Surgery at the Woman's Medical College; Demonstrator of Anatomy,
Toronto University; Surgeon to the Victoria Hospital for Sick Children, Toronto;
Member of the American Orthopedic Association.

THE knee-joint is the largest joint in the body, and is also one of the most exposed. Its synovial membrane not only covers a large amount of joint surface, but is almost directly subcutaneous throughout a considerable portion of its extent. It has not only a true hinge-joint motion, but also a gliding movement, in the course of which the articular surface of the tibia comes into contact with the posterior aspect of the condyles of the femur, in which position of flexion the outer and inner hamstring muscles, drawing nearly in the line of the axis of the femur, are pulling to a greater or less degree in a line which is at right angles to the axis of the tibia, and thus act at a great mechanical advantage in the production of subluxation, which is so common in chronic disease of this joint.

*Read before the Ontario Medical Association, June, 1893.

Of all the large joints, this one is most frequently the seat of tubercular disease, and only in the vertebræ is this affection found more commonly than in the knee.

It is spoken of as "white swelling," "strumous arthritis," "tumor albus," "scrofulous disease in the knee," "chronic, purulent, or fungous synovitis," and by other names.

The disease is much more common in children than in adults, and in them it more commonly is osseous in its origin, the epiphyses being the parts most frequently affected. In adults the greater proportion of cases begins in the synovial membrane.



FIG. 1.

The fact that both the femur and tibia grow chiefly at the ends which enter into the formation of the knee-joint is of considerable clinical importance. Ollier points out that long bones make fourteen-fifteenths of their entire growth at their epiphyseal areas. So much of the growth of the entire lower extremity occurring in the parts immediately contiguous to the knee-joint makes it a consideration of great moment that as little interference as possible shall be permitted with these growing parts. Senn,

in his book on "Tuberculosis of Bones and Joints," p. 466, gives a figure of a case in which, in the course of resection, both epiphyseal cartilages were removed, with a consequent shortening that brought the foot of the resected limb up to a level with the middle of the tibia of the opposite leg.

As in other joints of the extremities, in nearly all conditions of chronic disease, flexion is a clinical phenomenon which presents itself early, and is likely to persist to the end unless means be adopted to extend the limb and prevent flexion until the termination of the disease.

Fortunately, the knee is so situated that the rest which every joint should have which is affected with tuberculosis can easily and efficiently be obtained without subjecting the patient to the disadvantage of confinement to b.d. In this, as in all wasting diseases, it is highly important that such means should be employed as will permit the patient to enjoy the advantages of fresh air, sunlight, and exercise.

In the management of these cases, two problems may be mentioned as presenting themselves for solution: (1) How shall the patient walk without having the foot of the affected limb come into contact with the ground, thus causing jarring and possible traumatism of the diseased parts? (2) In cases where there is flexion of the joint, or flexion with subluxation, how may the limb be extended and the subluxation corrected without causing undue intra-articular pressure?

The first problem finds its readiest solution in the employment of the splint first made and used by the late Hugh Owen Thomas, of Liverpool. Simplicity of construction—always a recommendation—is a characteristic feature of this splint. It is, in effect, a perineal crutch consisting of a padded ring which passes obliquely around the upper part of the thigh, and supporting the body by coming into contact with the ischium and buttock. The plane of this ring forms an angle of 55° , with a bar of steel which passes from it down the outer aspect of the leg to a distance of three or four inches below the foot. A similar bar passes from the inner portion of the ring down the inner side of the leg, and at the same distance below the foot these two bars terminate in an oval ring, which constitutes the walking surface of this crutch. Under the shoe worn upon the sound foot is a sole of cork, raising it so that the feet are brought to the same level. The back part of the leg below the knee rests in a leather support, passing behind from bar to bar, while the front of the thigh is crossed by a broad strap passing between the same bars. In this manner the patient soon learns to walk, stepping alternately upon the elevated shoe of the sound side and the perineal crutch worn upon the diseased limb, without bringing the foot of the latter at any time into contact with the ground.

If the limb is found flexed when the splint is first adjusted, the steel

bars may be bent to take the same shape as the affected limb. If the case is a recent one, very frequently the wearing for a few weeks of the appliance thus adjusted will secure such rest for the joint that partial or complete straightening may be effected without force. The longer continuance of the same treatment often permits of complete extension.

The second problem above suggested is sometimes impossible of accomplishment by mechanical means. The head of the tibia is found carried so far upward and backward that when any attempt at straightening is made the tibia is liable to be thrown quite behind the condyles of the



FIG. 2.

femur, thus giving a very insecure member for support. In such a case, excision is the only means by which the bones may be brought into satisfactory coaptation.

In some of these cases, however, especially where the disease is still active, and the tissues about the joint do not form strongly resistant limitations, replacement of the tibia and straightening of the limb may be effected by the employment of traction upon the tibia while continuous force is employed to extend the knee. Loops of steel are attached close to the

bottom ring of the splint where it joins the supporting bars, from which straps are carried upward, and buckled to adhesive plasters bandaged to the leg as high as the knee (Fig. 3). By this means continuous traction is made while counter-extension is secured by the ring which supports the pelvis at the ischium and the gluteal region. In such cases, the leather support which passes from bar to bar behind the leg should be made of sufficient extent to support well the upper end of the tibia; so that while the lower end of the femur is being pressed backward by the strap passing in front of it, and while traction is being made toward the loops at the bottom of the splint, the upper end of the tibia is being pressed forward by its carefully adjusted support.

We have thus three mechanical forces acting in conjunction to accomplish our purpose: (1) The traction and counter traction employed in pulling the tibia downwards and the femur upwards, thus tending to bring their points at the knee into a favorable condition for adjustment; (2) the strap passing in front of the thigh just above the condyles of the femur continuously pressing that bone backwards at its lower end; and (3) the supporting strap behind the leg constituting a means of pushing the upper end of the tibia forward.

The mechanical means thus described are easy of adjustment, and are easily borne by all children and many adults. They secure complete rest for the affected part, and permit the freedom of movement and manner of life which does so much to aid in maintaining the general health of the patient.



FIG. 3.

The cases shown to-day and the photographs now exhibited will serve to illustrate the results which have been obtained by the treatment described.

CASE 1. D.S., thirteen years. In July, 1890, his right knee was injured. This was soon followed by swelling. The joint was aspirated, washed out with sterilized water, and kept at rest. Family history tubercular.

Sept., 1890. Knee still contains fluid, bones enlarged, motion much limited, extension not permitted beyond 135° , and marked atrophy of muscles above and below the knee. Splint applied.

Feb., 1891. No fluid in joint; no tenderness; movement through an arc of 10° . Right knee, $11\frac{1}{2}$ inches; left knee, $10\frac{1}{2}$

inches. Patella freely movable, eats and sleeps well, goes to school, and wears splint with comfort.

Sept., 1891. In good general condition ; goes to school ; has grown so much that splint had to be lengthened. Right leg, $27\frac{1}{2}$ inches in length ; left leg, $25\frac{1}{2}$ inches. Right thigh, in circumference, 10 inches ; left, $12\frac{1}{4}$ inches. Right knee, $11\frac{1}{2}$ inches ; left, $10\frac{1}{2}$ inches. Right calf, $8\frac{1}{2}$ inches ; left calf, $9\frac{1}{2}$ inches. No fluid in joint ; slight tenderness on pressure at the external part of the line of the joint. The limb is held fully extended and no flexion permitted. Temperature at 4.30 p.m., 100.4° ; pulse, 108.

July, 1892. Right knee, $11\frac{1}{2}$ inches ; left, 11 inches. Right leg in length, $28\frac{1}{2}$ inches ; left, $27\frac{1}{2}$ inches. Temperature at 9 p.m., 98.8° . Voluntary flexion through an angle of 45° ; splint has been worn constantly ; general health excellent ; has gone to school regularly ; splint to be left off.

CASE 2. G.C., five years. Family history good, except that father had some painful affection of the knee with swelling when about nineteen years of age. First saw him August, 1891 ; had been intermittently lame for two years ; thinks leg was sprained by nurse in putting on stocking. Left knee, $9\frac{1}{4}$ inches ; right, $8\frac{1}{2}$ inches. Left thigh, 9 inches ; right, 10 inches. There is little flexion, the leg having been kept for a considerable time in gypsum. Splint was at once applied as above.

May, 1892. Health good ; knees same size ; voluntary movement through a few degrees when plaster is removed ; no tenderness ; no effusion.

April, 1893. Health good. Left knee, $8\frac{3}{8}$ inches ; right, $9\frac{1}{8}$ inches. Voluntary motion through an arc of a few degrees ; outlines of knee restored to almost natural appearance ; gypsum case left off ; splint retained.

June 22. Splint so modified to-day as to permit of his walking with his foot on the ground.

CASE 3. G. McM., five years. Family history tubercular. In March, 1890, a swelling was noticed in the right knee, with slight pain. Shortly afterwards effusion was detected ; was painted with iodine, and had gypsum bandages applied. After a few weeks the plaster bandages gave place to a short posterior splint.

Nov., 1890. Right knee, 8 inches ; left, $7\frac{1}{2}$ inches. Atrophy of muscles above and below the right knee ; flexion to nearly a right angle permitted, and extension to 155° ; no voluntary movement at the joint ; knee is red, slightly edematous, and circulation obstructed. Plaster of Paris case and Thomas splint employed.

Dec. 31st, 1890. Leg is nearly straight ; general condition good ; appetite and sleeping improved.

June, 1891. General health not so good ; little change noticed in condition of knee ; change of climate advised.

Sept., 1891. Has spent two months in the Northwest ; general condition much improved.

Jan., 1892. Has continued in good health, grown stouter, has better appetite, and makes no complaint about the knee. Right knee, $7\frac{1}{2}$ inches ; left, 8 inches. There is no voluntary movement at the joint when the splint is left off. The external rotation and backward displacement formerly existing are fully corrected.

Sept., 1892. Spent a part of the summer at Sault Ste. Marie. General health excellent ; voluntary movement when splint is removed.

April, 1893. Plaster of Paris left off. Left knee, $8\frac{3}{4}$ inches ; right, $7\frac{3}{4}$ inches. Splint to be left off at night.

June 22, 1893. Mother reports voluntary motion through an arc of 90° .

CASE 4. M.W., thirteen years. In September, 1887, left knee was hurt at school ; before Christmas, 1887, was lame ; much worse in February, 1888 ; got better, but never free from lameness since. In spring of 1892 was very lame, but long before that the limb was kept constantly flexed.

May, 1892. Flexion has recently much increased, and now extension is permitted only to 150° . Right knee, $11\frac{3}{8}$ inches ; left, $12\frac{3}{4}$ inches. There is more than one inch atrophy in the thigh muscles. Splint applied.

Aug., 1892. Leg permits of extension to 165° . There is more tenderness in the knee than formerly.

May, 1893. Leg about fully extended ; no pain ; slight tenderness ; health good ; has gone to school every day this year.

June 22nd, 1893. Was kicked in the knee by a boy when coming from school two weeks ago ; came home crying with pain ; cold water cloths applied. Now very much tenderness and pain ; swelling much increased.

CASE 5. C. P., six years. In December, 1889, had pain in left knee at night, and would wake up crying. Some time previous to that there was an awkward movement in the limb when running. Seemed better in spring of 1890. In June, 1890, there was much swelling and tenderness after a fall. Leg was kept bent at the knee. At that time plaster of Paris case was applied ; and he was kept at rest for a month.

Nov., 1890. Leg can now be flexed to a right angle, and extended to 150° ; condyles of the femur much enlarged, but not tender. Left knee, $8\frac{3}{4}$ inches ; right, 8 inches. Left thigh, 9 inches ; right, 10 inches. Left calf, 7 inches ; right, $7\frac{3}{4}$ inches. Plaster of Paris case applied while moderate extension is made. Thomas splint applied.

Dec. 31st, 1890. Plaster of Paris reapplied ; limb now fully extended.

June, 1891. Condition of health improved. Is very active, running about freely, and being much out of doors.

Aug., 1891. Has been much in the country during the summer; knees the same in circumference; condition in every way satisfactory.

Dec., 1891. After coming from the country was allowed, without my knowledge, to walk for three weeks without his splint, his parents considering the knee cured. Soon complained of pain in the knee at night. The knee is now flexed and tender; not much swelling, but left knee is slightly larger than the right.

Jan. 21st, 1892. Left knee, $9\frac{3}{4}$ inches; right, $8\frac{3}{4}$ inches. Has been complaining much of pain in the knee; does not walk about much; looks pale; tongue is furred; has frequency of micturition; knee very tender; permits of no movement; no effusion into the joint. The leg is kept at an angle of 150° . There is external rotation, and some backward displacement. Temperature, 100° . Local temperature of left knee very noticeably increased.

May, 1892. Suppuration. Fluctuation most marked above the patella towards its inner aspect. Opened, scraped out with the finger, and dressed antiseptically. Did not determine whether abscess communicated with joint.

Sept. 9th, 1892. Hydrogen peroxide was the disinfectant employed in treatment of abscess cavity; discharge has ceased; flexion, 150° ; luxation much increased: no tenderness; knees of same circumference; applied extension while wearing splint as in Fig. 3; general health good.

May, 1893. Extension with good support of the tibia in its upper part has fully corrected the displacement of that bone; no discharge; health good; slight voluntary motion.

CASE 6. N. McM., eleven years. Family history tubercular; is fairly well nourished. History of a fall at four years; not much hurt, and no lameness noticed for some weeks. Shortly afterwards was lame in right leg. In summer of 1891 began to use crutches, and about that time the flexion at the knee increased very much.

July, 1892. Right knee, 12 inches; left, $10\frac{3}{4}$ inches. Right calf, 8 inches; left, 10 inches. A.G.F., 65° ; A.G.E., 120° . Backward displacement of tibia and external rotation very strongly marked. Splint and extension applied.

October, 1892. Attending physician writes that the knee is doing well. Limb almost straight; knee is smaller; much less tenderness; sleeps better at night; parents are delighted with her improvement. Extension is being kept up, and syrup of iodide of iron and cod liver oil are being used.

May, 1893. Leg is fully extended, but backward displacement is very

marked, shortening $1\frac{1}{2}$ inches ; no tenderness, infiltration, or local heat ; general health excellent ; goes to school every day. An attempt will be made to correct the displacement of the tibia.

The cases above related are selected as illustrating the conditions most amenable to treatment by mechanical means. Attention may be called to a few practical lessons gleaned from the history of these cases : (1) In Case 1, where splint was constantly worn night and day for nearly two years, there was no voluntary movement in the joint when the splint had been worn twelve months ; but when the appliance had been removed, at the end of nearly two years, there was voluntary movement through an arc of 45° . This should have some weight in setting at rest the question as to whether continued immobilization of a joint causes ankylosis. (2) In Case 5, the parents, finding that the general health and condition of the knee had continually improved, and believing that recovery had resulted, removed the splint at a time when the ordinary functional employment of the joint caused relapse, followed by strongly marked exacerbation of symptoms and suppuration. (3) Even when suppuration occurs, it is not always necessary to make a formal resection, or even arthrectomy (see Case 5). (4) In nearly all the cases related, there was displacement of the tibia, more or less marked, which has been entirely corrected in all the cases except two. One of them has not come directly under my own care, and at a recent examination I found that the mechanical forces had not been employed in such a manner as is desirable. (5) From measurements recorded in such cases, it is noticed that the inflammatory condition, bringing more blood to the rapidly growing portions of the bones, caused a marked lengthening in the affected limb. (6) When a case has been progressing favorably, and recovery appears to have resulted, it is wise to observe great caution in the removal of the protective appliances. It is well to shorten the splint and turn its side bars into the heel of the shoe, permitting the patient to walk directly upon the affected limb while the splint is still employed to prevent the traumatism which might result from accident. (7) If careful observation show a tendency to relapse as greater freedom is permitted in the use of the limb, a speedy return should be made to the most complete protection, and this should be continued until the health and local condition warrant its removal.

The frequency of flexion in the knee after excision, and the little attention given to the subject by surgical authorities, render it of great importance that mechanical protection should be continued for a sufficient length of time after treatment. So constant is the occurrence of relapse, especially in children, that Schede at one time said that he had abandoned the operation in children under seven years. (Transactions of American Orthopedic Association, Vol. iv., p. 54.)

The splint above described forms an excellent walking crutch, which may be used until there is satisfactory solidification at the seat of operation, and until the surrounding tissues have adapted themselves to the new situation.

THE PREVENTION OF TUBERCULOSIS IN ONTARIO.*

By E. HERBERT ADAMS, M.D., TORONTO,

Physician to St. John's Dispensary, The Nursing-at-Home Mission, The Yorkville Dispensary, etc.

DURING the last few years no disease has received so much attention nor been productive of so much discussion as tuberculosis. When Robert Koch in 1890 announced to the world the marvellous effects produced by tuberculin many physicians and consumptives made veritable fools of themselves in their eagerness to obtain an early supply of the remedy. The bubble has burst. Many of the patients who were among the first to receive injections are dead; others are living in spite of the lymph; while a third and smaller class have perhaps received some benefit from a judicious use of tuberculin along with climatic and other treatment, and are apparently cured.

It was indeed a wonderful remedy in its selective and specific action on tubercular affections, and, despite the ban it is under at present, may yet in an improved form fill a more or less important place in the *materia medica* of the future.

Be that as it may, it is certain that this much-vaunted and much-libelled remedy did much to awaken original study and investigation into the nature, cause, and cure of this dread disease, which cannot but be productive of great good in the near future.

The medical magazines and the secular press have been teeming with literature on this subject. For some time past, almost every fresh medical journal has had a description of some new and seductive remedy for tuberculosis. Many of these are more or less useful, while others are utterly useless, and often positively harmful.

After a careful and practical study of the results and possibilities of the better class of these remedies, my conclusions are that pulmonary tuberculosis is curable in a large percentage of cases in the earlier stages of the disease, and not infrequently even in the more advanced stages; but that as the disease is undoubtedly contagious, and as the source of the contagion is capable of being isolated and destroyed with comparatively

*Read before the Ontario Medical Association.

little inconvenience to the individual or expense to the state, that preventive measures are of primary and not secondary importance to medicinal treatment. And it is with a view of advocating a systematic and feasible method of prevention that this paper is written.

PREVALENCE OF THE DISEASE.

It is safe to say that no other disease, no form of accident, no civil or other war, has produced so much suffering or caused so many deaths as tuberculosis. During the twenty-five years ending 1886, the average annual total deaths from consumption in England were 50,000. Other tuberculous affections caused 17,700 deaths, making in all a total yearly death rate of 67,700.

In the United States in 1880 the deaths from this disease, estimated from the census returns, were 150,000.

Baer states that the tubercular death rate of the whole world is 15 per cent., and that in prisons it ranges from 40 to 50 per cent. Between the ages of 20 to 40, it is estimated that from one-half to one-third of all deaths are due to tuberculosis.

From the end of 1880 to the end of 1890, there were in Ontario 24,437 deaths from consumption. This does not include deaths from other than the pulmonary form of the disease, and shows that there were as many deaths from consumption alone in Ontario in ten years as from scarlet fever, measles, smallpox, whooping cough, diphtheria, croup, and typhoid fever combined. And yet the death rate is not the only point to consider; for the duration of illness, and consequently suffering, is greater in this disease than in most other diseases.

Senn,¹ of Chicago, says that most of the large hospitals contain 25 to 50 per cent. of patients afflicted with this disease, and that a very large percentage of surgical operations are due to tuberculosis.

Konig states that in surgical clinics the surgeon will have one hundred cases of tuberculosis of the joints to deal with to one of other classes of inflammation, such as rheumatic, gonorrheal, syphilitic, or suppurative.

From a study of the hospital reports of the Sick Children's Hospital, Toronto, for the ten years ending 1890, I found that over 34 per cent. of all the diseases for which patients were admitted into the hospital during that time were of a tubercular nature.

As a test to prove that this percentage was approximately correct, Dr. George Clingen, the house surgeon, made a careful and thorough examination of all the cases admitted during the year he was house surgeon, and found that 25½ per cent. of all the patients admitted into the hospital that year were suffering from some form of tubercular disease. And so

¹ Principles of Surgery. N. Senn, 1890.

we may consider that from one-quarter to one-third of all the patients that have ever been admitted into the hospital are suffering from some form of tuberculosis.

From the foregoing statements a fair idea can be obtained of the immense ravages of the disease, and the consequent suffering and loss of life and of wealth to the nation.

Nor is the disease confined alone to humanity. The cow; and the pig, and other animals are also victims of the scourge.

Toussaint, in 1888, gave the percentage of tuberculous cattle as 6 per cent. Bitter states that he believes that at least 10 per cent. of dairy cattle are tuberculous in cities and their environs. Of all the cattle slaughtered in Berlin in 1890, 4.5 per cent. were tubercular. In Saxony, in 1889, of 34,975 cattle inspected, 3,986, or 11.4 per cent., were tubercular. The percentage varied in localities from 1.1 to 15.8 per cent. Veterinary surgeons tell me that they know several different dairies around Toronto in which there are tubercular cattle, and in one herd most of the animals are affected. (This herd has since been isolated by the Provincial Board of Health.) It is a startling statement, but, nevertheless, a highly probable one, that about one-sixth of the cattle supplying milk to Toronto are tubercular. This is a source of danger, especially to young children, for the bacillus tuberculosis is present in such milk, and is undoubtedly, in some cases, at least, a cause of intestinal and other forms of tuberculosis.

Sufficient has been said to show the prevalence of this dread disease. Not that it is more common in Ontario than elsewhere. In fact, the death rate is much less here than in many countries and states; but the loss of life and suffering here are sufficiently alarming—for there are few families but have had some relative or near friend die of the disease—to make us all united in the desire to spare neither money nor labor to eradicate the disease, if such be possible.

THE CONTAGIOUS NATURE OF TUBERCULOSIS.

The overwhelming evidences which, during the last decade, have been adduced in favor of the bacillus tuberculosis being the direct exciting cause of tuberculosis have silenced the objections of almost all conscientious scientific doubters. Among old school physicians and others unversed in modern pathological methods of investigation, there are still many strong opponents to this doctrine.

These Prof. Tyndall ("On the Origin, Propagation, and Prevention of Phthisis," *Fortnightly Review*, Sept., 1891) defines as "a number of loud-tongued sentimentalists who, in view of the researches they oppose and the fatal effects of their opposition, might be fairly described as a crew of well-meaning homicides."

Before such a scientific gathering of medical men as this, and in a

country where the standard of medical education is so excellent, it will hardly be necessary to do more than briefly review the data upon which we base our knowledge of the contagious nature of tuberculosis.

Our knowledge on this subject is comparatively modern, though more than a century ago there were many believers in the contagion theory. For sixty-six years, from 1782 to 1848, in Naples, rigorous though somewhat crude laws were enacted for the prevention of consumption on the theory of its contagious nature, and Dr. Lawrence F. Flick, who has carefully studied the condition of Italy before and after the enactment of these laws, states: "It will not be overstepping the mark to place the mortality rate from tuberculosis for the Kingdom of Naples and Italy for 1782 at 10 per 1,000 living. In 1887 the mortality rate from all tubercular affections for all Italy was 1.29 per living 1,000. Expressed in figures, the reduction in mortality from tuberculosis in Italy since 1782 ranges from 60 to 90 per cent.

Villemin, in 1865, was about the first to produce tuberculosis in rabbits by inoculating them with tuberculous material; but it remained for Robert Koch, in 1882, to demonstrate that the true cause of tuberculosis of all kinds was the tubercle bacillus ("Die Ätiologie der Tuberculose," *Berlin Klin. Wochenschrift*, 1882, No. 15). He showed the bacillus to be present in all forms of tuberculosis, and obtaining pure cultures of the bacillus proved that artificial tuberculosis could be produced in animals by inoculation.

His observations have since been abundantly verified by numerous other observers, and at the present time all reputable medical colleges teach their students how to stain, mount, and examine under the microscope sputa or diseased tissues suspected of containing the bacillus tuberculosis. And there is no hesitation on my part in saying that the medical student who is not able to make such examinations successfully should not be allowed to graduate from any Canadian medical college; and also that the general practitioner who does not use this means of diagnosis in consumption is omitting one of the most important elements for the correct and early diagnosis of the disease, and without which he cannot do full justice to his patient.

We know, then, that this peculiar bacillus, which is definite in form and in its susceptibility to certain staining materials, is present in every form of tuberculosis, no matter what organ of the body is affected, and there are few tissues of the body but have been implicated in this disease. We know that this disease is identical in man, the monkey, the cow, the horse, the pig, the rabbit, etc., and that without the presence of this bacillus there is no true tuberculosis. We know also that by inhalation and inoculation of pure cultures of these germs, the same disease can be produced in animals.

Senn ("Surgical Bacteriology," 1889) gives an excellent résumé of results achieved by experimental inoculation in animals, and mentions many cases of inoculation in surgical cases in man after contact with tuberculous material.

Abundant clinical evidence shows that where these germs most abound there other cases of tuberculosis, both of man and animals, most frequently occur. Many instances are recorded in medical literature of several or all the members of a previously healthy family being carried off with the disease after moving into a house formerly occupied by a victim of tuberculosis. You have all doubtless come across many such cases in your practice; though, on account of the slow and insidious course of the disease and the varying length of time it may take to manifest itself, it is very difficult usually to ascribe the exact source of the contagion.

A case is recorded in Paris where, in the course of eleven years, fifteen out of twenty-three clerks employed in an office died of tuberculosis. Cornet showed that 62.8 per cent. of the deaths among the religious orders for the care of the sick in Germany were due to tuberculosis. Flick's study of the death rate for twenty-five years from tuberculosis in the fifth ward of Philadelphia showed that many of the houses had six to eight deaths, and that over 33 per cent. of the houses where deaths occurred from consumption had more than one case. Cornet has published some statistics on the mortality from phthisis in Prussian prisons. During fifteen years, the mortality among males was 45.82 per cent. of all deaths; and among females, 49.33 per cent. of all deaths. Confinement, bad ventilation and lighting, together with the presence of the bacillus tuberculosis in the cells, due to improper cleansing of the compartments after the removal of former consumptive occupants, were the probable causes of the great mortality from consumption.

I have stated that the bacillus tuberculosis is the exciting cause of the disease, but there are certain other contributory and predisposing conditions which are also necessary before these germs can manifest their pathological effects. Among these are hereditary and acquired predisposition, bad drainage, bad ventilation and heating, bad sanitation of all kinds, overwork, and any debilitating influence whatsoever, and I do not wish to belittle in the slightest manner the great influence such conditions have in the production of tuberculosis, but merely to emphasize the fact that *without the presence of the bacillus tuberculosis these debilitating influences will not produce consumption or any other form of tuberculosis.*

Heredity has hitherto been considered the chief of these predisposing causes, and we cannot deny that it has considerable influence in the production of the disease, though, undoubtedly, many cases ascribed to

heredity are due to direct personal contagion and the infection of previously healthy members of the family long after birth, and not due to any hereditary influence whatsoever.

The great source of infection is, then, the inhalation of the dried expectorations of tubercular patients, the ingestion of tuberculous meat and milk from animals affected with the disease, and by the direct inoculation of tuberculous material into the blood through a wounded or abraded surface.

The first is by all means the greater source of danger, as hitherto little has been done towards destroying the bacilli which are so numerous in the expectoration of tubercular patients. The danger of infection, though at present almost universal, is much greater in the localities where the consumptives reside. The bacilli and their spores have considerable tenacity for life in the dried state, and exist for considerable periods of time after expulsion from their former host. Cornet and others have repeatedly shown the presence of these bacilli in the dust taken from the rooms and surroundings of tubercular patients, and by inoculation of animals with cultures taken from such dust have produced tuberculosis in these animals, which resulted in their death.

METHODS OF PREVENTION.

And now we will consider what measures of prevention are necessary and practicable for lessening this great scourge.

In the first place, the reporting of all cases of tuberculosis to the health department should be made compulsory for physicians, householders, and employers. By this means the responsibility would be with the health officer to see that proper methods for the isolation and destruction of the sputa were attended to, and that the surroundings of the patient were in a sanitary condition, and the patient not a source of contagion to others. These matters, in the better class of consumptives, are, as a rule, fairly well attended to on the recommendation of the family physician, but among the poorer classes these conditions are often much neglected. Free microscopical examination of the sputa of the supposed phthisical patients should be made by the health department at the request of any physician, as many physicians are unable to make such examination themselves.

By means of suitable pamphlets, distributed by the health department, the public should be educated to the fact that the expectoration of every patient in the advanced stages of the disease is a source of contagion to others unless such expectoration is destroyed, and that such patients should never expectorate on the floor or in a handkerchief, but always in a sputum cup or some other special receptacle. Other useful hygienic information in reference to the disease should be inculcated in the same manner.

Tubercular mothers and wet nurses should cease to nurse infants, as their milk is a source of contagion.

The public should be secured from danger from tubercular milk or meat by means of a rigid and systematic inspection of cattle, and specially qualified inspectors should be detailed for this work. The notification of the health authorities by owners of infected animals should be made compulsory.

All tuberculous animals should be condemned and killed after having been valued and paid for by the government.

Railroad and street car companies should furnish receptacles for sputa containing water, or a germicide, in their cars and stations.

There should be a careful cleansing and disinfection of the floors and walls of rooms after removal, by death or otherwise, of a consumptive patient.

In prisons and asylums, pulmonary tuberculosis in any of the inmates should be recognized as soon as possible by examination upon entering, and at frequent intervals. Such tubercular inmates should be separated from others, and their compartments cleansed and disinfected after their removal. In such cases the use of sputum cups and cuspidores should be enforced, and their employment in outdoor work, as far as possible, should be urged.

The prevention of consumption would be greatly aided by the erection of special hospitals or sanatoria for the consumptive poor. Municipal and government aid should be given to these institutions. For the poor, the ignorant, the careless, and the friendless, and for all consumptives in whose homes or boarding houses proper sanitary measures could not be used, such places would be a great boon, not only to themselves, but to others to whom they would otherwise be a constant source of worry as well as of contagion.

My own personal experience as a resident physician in a sanitarium for consumptives justifies me in saying that better results can be obtained there in many cases than elsewhere, and, under proper conditions, the depressing influence of segregation is not to be felt.

Selected Articles.

PELVIC PERITONITIS IN THE FEMALE AND THE PATHOLOGICAL IMPORTANCE OF THE FALLOPIAN TUBES IN CONNECTION THEREWITH.*

By C. J. CULLINGWORTH, M.D., F.R.C.P.,

Obstetric Physician and Lecturer on Midwifery and Diseases of Women, St. Thomas' Hospital.

BEFORE attempting to convey an idea of the present state of our knowledge of pelvic inflammation, I must allude to the history of the subject, and especially to the word and writings of the man whom I believe to have been one of the greatest gynecologists of the century—M. Bernutz. At the time when Bernutz published his clinical memoirs, it was the current belief that the hard swellings felt above the vaginal roof on one or both sides of the uterus in cases of pelvic inflammation were invariably due to inflammatory exudation in the connective tissue at the base of the broad ligament, or between its layers. Nonat had for ten years been upholding this doctrine, and under the influence of his authority and dogmatic teaching it had come to be almost universally accepted. Various names were given to these exudations, but whether they were described as pelvic cellulitis, or parametritis, or periuterine phlegmon, there was practically no difference of opinion as to their seat. For some time Bernutz himself participated in the common belief. The fatal termination, however, of two cases under his own care served effectually to change his views, and enabled him "to prove incontestably that the periuterine tumor, which during life presented all the symptoms of the so-called periuterine phlegmon, was not situate in the cellular tissue at all. In the necropsies in question the tumor, which even after death presented all the usual signs, was seen to be formed by the pelvic viscera matted together by peritoneal adhesion."

Bernutz did not, as he is sometimes erroneously represented to have done, deny the existence of a phlegmon or inflammatory exudation be-

* Address in Obstetrics and Gynecology at the Annual Meeting of the British Medical Association held at Newcastle-on-Tyne, August, 1893.

tween the layers of the broad ligament, especially in puerperal cases ; but he considered them rare as compared with the swellings due to pelvic peritonitis, and he himself never met with one in the *post-mortem* room. The conclusions at which Bernutz arrived as a result of his researches have been summarized by himself as follows : (1) That inflammation of the pelvic peritoneum is a disease very commonly met with ; (2) that the tumor found after death in cases of pelvic peritonitis is formed by various intrapelvic viscera being matted together as a consequence of the inflammation ; and (3) that inflammation of the pelvic serous membrane is always symptomatic, and that it is generally symptomatic of inflammation of the ovaries or Fallopian tubes.

It might be thought that views so clearly expressed and supported by such incontrovertible evidence must needs have met at once with general acceptance, and become part of the common stock of professional knowledge, but they did nothing of the kind. For twenty years the old views continued to be generally taught, and even yet they form the basis of much of the current teaching and practice in regard to pelvic inflammations.

In the year 1872, the operation for the artificial induction of the menopause, by the removal of the healthy Fallopian tubes and ovaries, was carried out by three operators of different nationalities at dates so closely following one another, and yet at places so remote, that it was practically impossible for there to have been any sort of concerted action. On July 27th, Hegar performed the operation at Freiburg in a case of ovarian pain and menorrhagia. Five days later Lawson Tait operated at Birmingham on a case of uterine myoma with excessive hemorrhage ; and within three weeks of Hegar's operation, a highly respected American gynecologist, Dr. Robert Battey, of Rome, Georgia, performed a similar operation on a patient with hystero-epilepsy and amenorrhea.

In the course of two or three years the number both of operations and operators began rapidly to multiply. From the good results obtained it was expected that the scope of the operation would soon be widened, and instead of being limited to the removal of the normal organs would be extended to cases where the uterine appendages were themselves the seat of the disease. And this is precisely what took place. In the years 1879 and 1880 Hegar, in Germany, and Lawson Tait, in this country, operated on several patients for the removal of the inflamed ovaries and tubes, and then it was that the accuracy of the observation of Bernutz came to be fully recognized, and his apparently barren discoveries to bear their legitimate fruit. The knowledge at which he had arrived by *post-mortem* investigation was now arrived at in a different, but at least equally conclusive, way by actual inspection and touch during life.

PELVIC CELLULITIS COMMONLY A SECONDARY DISORDER.

During the past five or six years I have performed abdominal section in nearly one hundred cases that in the early part of my professional career I should have regarded as well-marked examples of pelvic cellulitis—namely, cases in which the mobility of the uterus was more or less impaired, and in which hard, irregular fixed swellings could be felt above one or both lateral fornices of the vagina, and often extending into Douglas' pouch. In the vast majority of those cases I found no evidence of cellulitis at all and, where it did exist, it was clearly secondary to the salpingitis and peritonitis which constituted the principal lesions present. In no case was there any inflammatory exudation in the cellular tissue of the broad ligament or elsewhere sufficient to form a distinct tumor recognizable as such on bimanual examination. In some cases of chronic suppurative inflammation of the uterine appendages, the broad ligaments were the seat of a certain amount of thickening from inflammatory exudation, but this obtained only in the neighborhood of the suppurative disease, and the thickening seldom exceeded one-eighth of an inch, and even in extreme cases never exceeded half an inch.

 PELVIC INFLAMMATION USUALLY A PERITONITIS ORIGINATING IN
SALPINGITIS.

The usual state of things disclosed on opening the abdomen in these cases is as follows: The contents of the pelvis are generally concealed from view by the great omentum, which has been drawn down so as to cover them in anteriorly, and has contracted adhesions to the peritoneum as it becomes reflected on to the anterior abdominal wall, as well as to the uterus and other pelvic viscera. Along with this screen, as it were, of omentum, it is not unusual to find coils of adherent small intestine. On separating and drawing aside this screen, one side, or it may be the whole, of the posterior part of the true pelvis is seen to be occupied by what appears to be an indistinguishable mass of matted viscera. The uterus itself is sometimes implicated in the mass, but in other cases its upper part at least is free. Tracing the Fallopian tube outwards from the uterine cornu on the side of the disease, it is often found to be normal in size for the first half inch or so, and then to become involved in the adherent mass. This mass, on being separated and brought into view, is invariably found to consist of the uterine appendages more or less altered by inflammation. There is always salpingitis, and the inflamed and thickened tube usually unfolds the ovary. In a large number of cases the ovary itself is normal, except that it is universally adherent. In other cases it is a condition of incipient cystic degeneration. I do not allude to the harmless condition, sometimes spoken of as incipient cystic degeneration, in which several Graafian follicles, distended with serum, cause transparent pro-

jections from the surface of an otherwise normal ovary, but to that condition in which true cysts are found, varying in size from a marble upwards, and in which the normal structures of the organ have become more or less replaced by them. Whenever the lateral swelling is so large as to push the uterus to the opposite side, this condition of the ovary may be suspected. In many cases the cysts in the ovary are found to be in a state of supuration, their contents having presumably become infected from the inflamed and suppurating Fallopian tubes. Of primary ovaritis, either acute or chronic, which is supposed by some authorities to be a common affection and a frequent cause of pelvic peritonitis, I have scarcely (apart from tuberculous disease) met with a single example.

With regard to the tubes, the first point to be noted is that the evidences of the peritoneal inflammation are always most marked in the neighborhood of the fimbriated end, showing clearly that the pelvic peritonitis has originated by direct extension from the mouth of the inflamed tube, or by the escape of morbid secretions therefrom. When the secretion from the inflamed tube is chiefly mucous in character, with only a slight intermixture of pus corpuscles, the intensity of the inflammation around the abdominal ostium is shown by the extreme density of the adhesions at that spot and nothing more. When the secretion, on the other hand, is wholly purulent, one of two things has found to have happened, according to whether the fimbriated end remains patulous or has become closed. In the former case, an intraperitoneal abscess is found, encysted among adhesions, and fed by the purulent discharge issuing from the open mouth of the suppurating tube.* In the latter case the pus, accumulating in the occluded tube, distends it, sometimes uniformly, but more often irregularly, forming a series of loculi or pouches full of pus here and there along the tube, in either case constituting the condition known as pyosalpinx.

COMPLICATIONS OF SALPINGITIS.

Amongst the secondary changes that occur as a consequence of these inflammatory processes, there are one or two of such importance as to call for special mention. When the salpingitis is unilateral, it is not at all unusual to find that the peritonitis in spreading from its place of origin, the fimbriated end of the inflamed tube, has passed over to the other side of the pelvis, involving the healthy uterine appendages of that side in a mass of adhesions. Under such circumstances closure of the abdominal ostium of the healthy tube is apt to occur, and to be followed by the development of a hydrosalpinx, which, though then simply an incident in the course of an attack of pelvic peritonitis, may in its turn itself become a source of suffering and ill-health. In my experience, this is the commonest mode in

* Pelvic abscesses bursting into the rectum or into the vagina are almost always of this nature and not of cellulitic origin, as has been commonly supposed.

which hydrosalpinx is developed. Hematosalpinx, as a complication of salpingitis, is much more rare. In the great majority of cases, hemorrhages within the tube and hematoceles of tubal origin are the consequence of tubal gestation, but now and then they occur as incidents in the course of the inflammatory processes I have just described, and quite independently of gestation. The outcome of a knowledge of the facts I have laid before you is to give to the Fallopian tubes an enormous importance in the pathology of pelvic inflammation.

It has been somewhat the fashion of late to sneer at those who have become impressed with the pathological importance of the Fallopian tubes as the victims of a mere passing craze, who can see nothing but diseased tubes in every gynecological case that comes before them. The phenomenon is one that need not excite the least surprise, or arouse the least resentment. It is a matter of common experience that those who are left behind by the advancing tide of knowledge, whether it be from prejudice, or lack of opportunity to observe, or the inability to take in new ideas, which is one of the heaviest penalties of advancing years, are tempted to deny that the advance is real, and to ridicule or denounce those who accept it. When the ophthalmoscope was first introduced into this country, a paper was read on the subject before a provincial medical society, when one of the leading oculists of the town, a man of large experience and great ability, rose and said that it was perfectly absurd for any one to come there and describe various appearances seen at the back of the eye; the back of the eye was black, and there was nothing more to be said about it. There always were and always will be people like this old oculist, ready to assert that, where they can see nothing but blackness, nothing but blackness exists. Such men are to be accepted as an inevitable part of what Professor Huxley has recently called the cosmic process, and the true evolutionist consoles himself by the reflection that even they may one day be shown to subserve some useful purpose therein.

The pathological importance of the Fallopian tube is due to its peculiar anatomical position in the human subject. There is, so far as I am aware, no other mucous canal in the body similarly situated. It is exposed to constant risk of infection, owing to the direct continuity of its lining membrane with that of the uterus and vagina, so that it is almost by a miracle if it escapes in any case of acute infective endometritis, whether septic or gonorrheal. But there is the widest possible difference between the danger of an acute endometritis and an acute endosalpingitis. In the former the patency of the cervical canal provides a natural outlet for the morbid secretions; in the latter there is no such natural outlet. The uterine end of the Fallopian tube has, even under normal circumstances, a lumen only just large enough to admit a fine bristle. It will, therefore, be readily

understood that it only requires a very slight swelling of the mucous membrane, such as is probably inseparable from the mildest inflammatory attack, to block up that end completely. Hence, as an outlet for inflammatory secretions, the uterine orifice may practically be regarded as non-existent. The position of matters, therefore, is that there is no outlet at all for the morbid secretions, owing to the closure of one orifice by the swollen mucous membrane and the closure of the other by adhesions, or the only outlet is through the abdominal ostium into the peritoneal cavity. It is this fact of the absence of a safe outlet for inflammatory products that makes an attack of suppurative salpingitis so much more serious a matter than an equally severe attack of suppurative endometritis, and that invests the inflammatory affections of the Fallopian tube generally with such an exceptional and grave importance.

IMPROVEMENTS IN DIAGNOSIS.

But it is not only in pelvic pathology that we have been recently enabled to add to our knowledge; our powers of diagnosis have been enlarged. A little time ago the idea of being able to map out and examine the uterine appendages in the living subject would have been scouted with derision. To-day I should be ashamed for any of my clinical clerks to be found, at the close of their three months' tenure of office, unable to diagnose, under reasonably favorable circumstances, the size, position, consistence, and mobility of the Fallopian tubes, even if not of the ovaries as well, with a fair amount of accuracy.

In order to make a satisfactory bimanual examination in a suspected case of pelvic inflammation, I believe it to be essential that the patient be in the dorsal position, with the knees flexed and separated, the head supported on a single pillow, and the shoulders not raised, as is generally recommended, but lying flat on the couch or bed. To avoid strain (and no examination can ever be satisfactory in which the posture of the examiner involves the least strain), the examiner should stand or sit directly in front of the patient. Only in this way can the full advantage of the bimanual method be obtained. I know that it is usually recommended, more particularly in Scotland, that the examiner, even when the patient is in the dorsal position, should stand at the patient's right side whilst conducting the bimanual examination. But consider for a moment what that involves. The two hands are at right angles to each other. By facing the patient this awkwardness is avoided; the hands and forearms are parallel to one another, and the necessary manipulations are thereby carried out more effectually because more easily. With regard to the respective merits of the dorsal position and the left lateral, or English obstetric, position for purposes of bimanual examination, there seems to me really no room for discussion. No one who has once accus-

tomed himself to place his patients in the dorsal position, and has experienced the vastly increased ease with which the deeper parts of the pelvis can be thus explored, will ever willingly revert to the older plan. It has been said that the dorsal position is less modest than the position on the left side, and therefore more trying to the feelings of the patient. But is this really the case? Of course, I can readily understand that a patient who has been accustomed to be examined on the left side, and is for the first time placed in the dorsal position, will feel strange and uncomfortable, and disposed to resent the unaccustomed posture. Similarly, I can quite enter into the feelings of a medical practitioner who, having been in the habit of attending obstetric cases with the patient in the left lateral position all his professional life, and seeing for the first time an examination conducted with the patient lying on her back, is disposed to regard the proceeding as indelicate. But all this merely emphasizes once more the marvellous force of habit. There is nothing inherently indelicate in the dorsal position, and an examination can be conducted with just as much regard for the feelings of the patient when she is lying on her back as when she is lying on her side. When a woman has made up her mind to submit to the ordeal of an examination at all, she has done so because she wishes to know what is the matter with her, and she would certainly prefer, if the question were put to her, to be examined by that method which would best enable the examiner to form a correct opinion and to give her the information she seeks.

IMPROVEMENTS IN TREATMENT.

But we must not forget, in our eagerness after a more correct pathology and a more refined diagnosis, that the reason of our existence as practitioners of the healing art is to relieve suffering, and, where possible, cure disease. "There is one part of their business," says Oliver Wendell Holmes, in one of his inimitable essays, "which certain medical practitioners are too apt to forget; namely, that what they should most of all try to do is to ward off disease, to alleviate suffering, to preserve life, or at least to prolong it if possible. It is not of the slightest interest to the patient to know whether three or three and a quarter cubic inches of his lung are hepatized. His mind is not occupied with thinking of the curious problems that are to be solved by his own necropsy; whether this or that strand of the spinal marrow is the seat of this or that form of degeneration. He wants something to relieve his pain, to mitigate the anguish of dyspnea, to bring back motion and sensibility to the dead limb, to still the tortures of neuralgia. What is it to him that you can localize and name by some uncouth term the disease which you could not prevent and which you cannot cure? An old woman who knows how to make a poultice, and how to put it on, and does it *tuto, cito, jucunde*, just when and where it is

wanted, is better—a thousand times better in many cases—than a staring pathologist who explores, and thumps, and doubts, and guesses, and tells his patient he will be better to-morrow, and so goes home to tumble his books over, and make out a diagnosis.”

I have called attention in the earlier part of this address to some of the indirect benefits that have accrued from operations undertaken for the removal of the uterine appendages, but I have said nothing as yet as to the value of these operations considered in regard to their primary object—namely, as a mode of treatment. It is desirable, in the first instance, to make a clear distinction between the operation for the removal of the uterine appendages when there is no obvious lesion of either tube or ovary, and the same operation when those parts are the seat of manifest disease. Probably owing in some measure to the fact that the one operation grew, as it were, out of the other, the two operations are continually being confounded both by speakers and writers, to the great perplexity of the uninitiated. The scope of Battey's operation—that is, the operation for the artificial induction of the menopause—never very wide, has become narrower and narrower as experience has increased, and is now practically restricted to the treatment of certain cases of uterine myoma.

OPERATIVE AND NON-OPERATIVE TREATMENT CONTRASTED.

In August of last year, a thin, emaciated woman, aged 37, was admitted to the Southwestern Fever Hospital, in London, supposed to be suffering from enteric fever. She had lived a dissolute life, and showed well-marked evidence in the palate of having suffered severely from constitutional syphilis. There was a distinct history of gonorrhea. She had been ill for three weeks with headache and loss of appetite, and for four days before her admission had suffered from pain in the abdomen and diarrhea. The abdomen, on admission, was somewhat distended and tympanitic, the tongue dry, the pulse rapid and feeble, and the temperature 103° . There were no spots, and the chest sounds were normal. On vaginal examination, the whole of the posterior part of the pelvis was found to be occupied by a firm, hard mass. Early in the morning of the second day after her admission, she passed a large quantity of extremely offensive purulent fluid from the vagina, and, four hours later, she died. At the necropsy a considerable quantity of semi-purulent fluid was found in the abdominal cavity, the contents of which were much matted together by adhesions, especially towards the pelvis. The uterus was somewhat enlarged, and its mucous membrane hyperemic. Both Fallopian tubes were found thickened, enlarged, and full of pus. They were curled back upon themselves, and their fimbriated ends, closed by inflammatory adhesions, were adherent to one another in Douglas' pouch. The remainder of the back of the pelvis consisted of a large abscess cavity, containing much offensive

pus. This abscess cavity was found to communicate with the interior of the right Fallopian tube, through an ulcerated opening in the tube wall ; it also communicated with the general peritoneal cavity, and, through a small, round opening in the posterior fornix, with the vagina. The ovaries were of normal size, and imbedded in the walls of the abscess cavity.

Here is another instance of death from rupture of a pyosalpinx. On April 8th there was admitted into St. Thomas' Hospital a very stout married woman, aged 41, with symptoms of general peritonitis, and in a state of collapse as though from intestinal perforation. For some months she had had an offensive vaginal discharge. Her present illness had commenced a day or two before admission. She was practically moribund when she arrived at the hospital, and died in a few hours. At the necropsy there was evidence of general peritonitis, most intense in the pelvis. The abdomen contained about a pint of highly offensive pus. Both Fallopian tubes were greatly and about equally distended, being equal in size to a piece of intestine. They were much distorted, and doubled backwards on themselves. Each of them was closed at both ends, and contained about an ounce of the most intolerably fetid pus. On the anterior wall of the left tube, somewhere about its centre, was a perforating ulcer through which pus could be squeezed. There was no other serious disease in the body, except that the mucous membrane lining the uterus was intensely inflamed, and a small, soft, ulcerated, gangrenous polypus projected into it from the left side of the fundus.

Both these examples of chronic disease ended fatally. Occasionally, however, tubal disease terminates fatally at a much earlier stage, as in the following terribly sad case :

A healthy woman, aged 27, was, a few years ago, admitted into St. Thomas' Hospital, with acute but ill-defined febrile symptoms, which had commenced four days previously. She had been nursing some cases of diphtheria, and, as she had slight soreness of the throat, with shivering, severe headache, vomiting, and aching of the limbs, it was thought she had caught the infection. Her temperature on the day of admission was 102° ; the day following it was 104° . On the third day she complained of some abdominal pain, and the evening temperature was 104.6° . At the end of a week the abdomen became somewhat distended. From that time the symptoms were those of general peritonitis. She died on the thirteenth day after admission, the temperature an hour before death having risen to 105.6° . At the necropsy there were evidences of acute general peritonitis, most marked in the pelvis. There was little or no fluid in the abdominal cavity, but abundance of lymph and much glueing together of the intestines and other abdominal viscera. In the pelvic cavity there was

an ounce or more of thick pus. The uterus was much involved in adhesions, but otherwise healthy. Both Fallopian tubes were acutely inflamed, and, upon making impression upon them, thick yellow pus in considerable quantity exuded from the outer extremity of each. The inflammation was most marked on the right side. The right ovary was larger than the left, and appeared congested; the left was quite healthy. All the other organs of the body were healthy, except that the lungs were somewhat congested and edematous.

Such is a brief account of three cases of purulent salpingitis that proved fatal, owing to escape of the contents of the tube into the peritoneal cavity; in two instances through a rupture of the tube wall, and in the third through the still unclosed fimbriated extremity of the tube.

I propose now, by way of contrast, to relate three cases of very similar character to the foregoing, in which the diseased tubes were removed by operation.

A young woman, aged 28, with a worn, pale face, and wretchedly thin, was admitted into the hospital on account of severe pain in the lower part of the abdomen, with pyrexia. She had been married five years, but had been separated from her husband for three years. Only once during the three years of their separation had the husband and she cohabited, and on that occasion, which was twelve months before her admission, he infected her with gonorrhea. In a few weeks she became too ill to continue at her work; and had to give up her home and go into the parish infirmary with her children. She came out in three or four months, but soon had to return. She again took her discharge, and resumed her occupation. Her health, however, soon gave way. She suffered great pain in the lower part of the abdomen, in the groins, and in the back, and eventually sitting became so difficult and painful that she had to relinquish her employment. The pelvis was filled with a hard, irregular mass, especially to the right of the uterus and behind it. The uterus was of normal size, pushed over to the left of the middle line, and fixed. Abdominal section was performed. The posterior part of the pelvis was occupied by a mass of inherent viscera, difficult to recognize and separate. Both tubes were thickened and much distended, and each communicated, by its open fimbriated end, with an intraperitoneal abscess, fed, evidently, from the suppurating tubes. The patient made an excellent recovery, lost her pain and ill looks, and became a picture of good health.

The next case is that of a married woman, aged 24, the mother of three children, who complained of severe pain in the back and left iliac region, the symptoms having come on suddenly four days previously. Her temperature varied from normal to 102.2° . She had had a similar attack three months previously, but in the meantime had felt fairly well. The

pain disappeared after the patient had been twenty-four hours in the hospital; but as there was in each posterior quarter of the pelvis a dense irregular mass, a portion of which could be felt as a tortuous and thickened tube, and as it appeared certain the case was one of chronic purulent salpingitis, it was thought the safest plan to operate. The decision was a fortunate one for the patient. The operation was performed. Both tubes were found irregularly dilated, occluded, and full of pus. Their walls were a quarter of an inch thick, and so deeply ulcerated that in places only the peritoneal coat remained. On the anterior surface of the right tube, at a point where the wall was specially thin, there were two small perforations through which pus was escaping. Probably these openings were made during the separation; but it was manifest that even if perforation had not already taken place, it was on the point of doing so. A delay of even a few days would have exposed this patient to a very serious risk. She made an uninterrupted recovery, and, when seen sixteen months later, looked so stout and well as to be scarcely recognizable.

The third case resembled in some of its features that of the nurse whose case I related in the first series. A chambermaid, aged 24, reported that she had been violated by a stranger staying at the hotel. During five weeks she had some pain on micturition and a vaginal discharge. She then felt pain in the right wrist. Three days later she was admitted to St. Thomas' Hospital, supposed to be suffering from acute rheumatism. She had pain and tenderness in several of her joints, without obvious effusion or redness of skin. Her temperature was frequently as high as 102° , and sometimes reached 104° . Five weeks after admission a vaginal discharge was noticed, and pain in the lower part of the abdomen. I was thereupon asked to see and examine her. I reported that she was suffering from gonorrhea, with pyosalpinx, pelvic peritonitis, and pyemia. She was transferred to my care, and a week after I operated. The pelvic viscera were matted together by peritoneal adhesions. The Fallopian tubes were thickened and full of pus. Behind the uterus and walled in by adhesions was an abscess the size of a Tangerine orange, fed by the two Fallopian tubes through their fimbriated ends. The result of the emptying of the abscess and removal of the tubes was immediate and striking. The pyemic symptoms rapidly disappeared, the parts concerned in the operation healed without a trace of suppuration, and the patient made a complete and excellent recovery.

Can there be any reasonable doubt that the lives of the first three of these six patients might have been saved by timely operation, or that the lives of the last three were so saved?

Do not let me be misunderstood. I do not for a moment suggest that every case of inflamed Fallopian tubes should be operated upon.

On the contrary, I am of opinion that most of them recover without. But there is a large residuum of cases, most of them chronic, some few acute, in which nothing but an operation can save life. And there is still a larger number of cases where a timely operation rescues the patient from years of misery, incapacity, and chronic invalidism. Every case has to be considered individually; no rules can be laid down which shall be of universal applicability. The woman who has her bread to earn, or who is the busy wife of a workingman, cannot afford the luxury of an illness extending over several years, and an operation would be justifiable in her case when it would not be in the case of her more well-to-do sister. The operation is, in short, not the one heaven-sent remedy superseding all others, but an invaluable addition to our resources which, when it is adopted in suitable cases, under a due sense of responsibility, and after full explanation to the patient and her friends both of the immediate risk and the ultimate physiological results, is capable of achieving triumphs as remarkable as any operation in surgery.

Progress of Medicine.

MEDICINE

IN CHARGE OF

W. P. CAVEN, M.B. Tor.,

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

MEDICAL SECTION OF THE AMERICAN MEDICAL ASSOCIATION.

ULCERATIVE ENDOCARDITIS.

The section in medicine at the recent meeting of the American Medical Association in Milwaukee opened by the reading of a paper by the chairman (Dr. Charles B. Stockton, of Buffalo) on "A Review of Ulcerative Endocarditis." The disease was to be considered in its relations to other endocardial inflammations. Since the notable lectures of Osler in 1885, we have really established a new category of endocardial inflammations. These are the result of a great variety of infectious agents, and we must give up the idea that all cases are simple in nature. We cannot say how the infecting agent gains access to the system, and we do not know just what it is, but bedside experience and the results of experiments upon animals alike prove (if we except the clearly rheumatic cases) that in endocarditis some morbid agent gains access to the heart.

As to the nature of rheumatism we are still in the dark. The reader regarded it as an infectious malady. Many cases of arthropathy classified under this head are really not rheumatic at all.

Again, the heart may suffer in Bright's disease and in gout. In the former there may be a development of ptomaines; in the latter a diminution of nitrogenous excretion, both of which act destructively upon the endocardium. In ulcerative endocarditis so-called, we may have either a cell proliferation with adhesion and contraction of valve-cusps, or else a softening and ulceration of the same with a development of infectious emboli. Hence "ulcerative" is too limited a descriptive term, and should be replaced by "malignant." The disease is undoubtedly of bacterial origin, but no pathogenic germ has been found to stand in an isolated causal relation to the affection. Weichselbaum, Franckel, Gilbert, and Leon have all contributed to our bacteriological knowledge along this line. The pneumococcus of Weichselbaum, the diplococcus of Friedlander, the bacillus coli communis have all been isolated from fatal cases. In certain instances the cusps show no ulcerations at all, but are covered with fungating vegetations. Taylor has suggested that certain germs localize their action on the initial valve and others on the aortic. Undoubtedly, certain micro-organisms always cause vegetations, while others may produce ulcerations.

Furthermore, the inflammation may begin either on the surface or in the substance of the valve-cusps, and the portions of cusp surface which are first brought into opposition by valvular closure are the site of the initial destructive process. This form of endocarditis occurs not infrequently on the right side of the heart, thus offering a marked contrast to the simple variety. Anaërobic germs would probably start up trouble here, while the aërobic would be more apt to affect the left side.

The disease is doubtless overlooked or unrecognized. Some are regarded as pneumonia, a thing quite natural from physical signs when we have the right heart involved and casting off septic plugs which stop up the pulmonary vessels.

GASTRODIAPHANY.

Dr. Max Einhorn, of New York, gave a demonstration of gastrodia-phany on two patients, and read an outline paper upon the topic. The procedure is really a translumination of the stomach. A soft rubber stomach tube is passed, in the end of which is a small Edison lamp connected with a battery, with the usual current interrupter at the proximal end of the tube. The latter should be lubricated with glycerine, and previous to its passage the patient should drink a glass of water. On making the connection, the stomach appears as an illuminated dome. Counter-pressure on the abdominal wall increases the brightening of the

zone of illumination. The zone is seen to descend in forcible inspiration as the stomach is pushed down by the diaphragm. This procedure will reveal the presence of gastropotosis, dilatation, tumors, and thickening. No accident has ever occurred. The glass of the lamp should, of course, be very thick.

DIABETES MELLITUS.

Dr. N. S. Davis, jr., of Chicago, read a paper on the treatment of diabetes. He thinks that patients are sometimes placed too quickly on anti-diabetic diet. As a result, there ensues depression, both mental and physical. He has seen two cases in which this sudden restriction led to diminution of urine, mental depression, physical malaise, and diabetic coma with fatal result. The patient should be gradually educated up to the necessary dietetic limitation, at least a week being spent in the process. If the patient can eat a potato daily without any increase in the sugar excreted, and if its withdrawal has no effect on its amount, he should be allowed to continue with it. A little bread can generally be allowed, and wheat bread is preferable to the gluten product, as most specimens of the latter are impure and contain starch. Macaroni in moderation is generally allowable.

In regard to drugs antipyrine, so warmly commended by Germain-Sée, has proven in his own experience practically valueless. Some cases have been benefited thereby, but it gives no uniformly good results. His preference is for Clemen's solution of bromine and arsenic, which since 1885 he has employed in nearly two hundred cases. Its mode of action is unknown. Arsenic is supposed to affect the glycogenic function of the liver, and to increase the oxygenation of tissue; but there is no experimental proof that Clemen's solution does this. In some cases of diabetes occurring in patients with previous renal affection, with dilated glomeruli and arterial sclerosis in the kidney, the solution, while improving the general symptoms, has not lessened the renal flow. The dosage should be begun with three drops after meals, gradually increased to ten or fifteen. An average dose is eight drops. Too large doses (even five drops) at the outset may cause diminution of urine, but at the same time considerable depression.

As annoyances in the use of the remedy, he has seen edema about the eyes, conjunctivitis, pharyngitis, and nausea, though the latter can generally be avoided by free dilution in water. A slow tolerance should be established. Codeine and morphine in large doses will also lessen sugar; but there are, of course, objections to this plan of treatment. Three cases responded well to arseniate of strychnine, with accompanying dietetic restrictions.

Dr. Davis has also used the pancreatic preparations, but without posi-

tive proof of their value apart from diet. Essence of pancreas has been employed for this purpose. Reference was made to the reports of Neville, Wood, Hale, White, and other English writers on the effects of employing pancreas tissue itself and liquor pancreaticus. He has been disappointed in ergot. It has shown no effect on the glycosuria, and but little on the polyuria.—*N. Y. Medical Record*.

BICYCLE KYPHOSIS.

One evil traceable to bicycling is the confirmed stoop which has already declared itself in many wheelmen, a result so common in the less strongly built bicyclists of the continent as to have found its way into classification as the "kyphosis bicyclistarum." The dorsal curvature posteriorly, which used to be rare in boys under fourteen years of age, is, now that the bicycle is so largely used, very frequently met with, particularly among those young bicyclists whose spinal column is developing more rapidly than the ligaments and muscles, and in whose case, therefore, the equilibrium between those parts is more or less disturbed. Were it merely unsightly deformity, the stoop in question ought to be combated in every way; but confirmed dorsal curvature posteriorly has consequences of its own quite mischievous enough to call for immediate counteraction. The displacement, embarrassed functional activity, and arrested or diseased development of the organs which kyphosis inevitably induces, are all too serious to warrant the slightest neglect in remedying them. Exercise of a kind to accustom the spinal column to an action directly antagonistic to the inclination forward of the bicyclist's attitude is what is needed. The use of the Indian clubs or such similar means of incurvating the spine anteriorly, throwing out the chest and maintaining the head erect, should be practised with that object. All the undoubted advantages of bicycling may thus be retained, without that cultivation of the stoop which tends to take a cubit from the stature of its inveterate exponents, and to impose a hunchbacked development on what it would then be a figure of speech to call the rising generation.—*Lancet*.

THE DIAGNOSTIC VALUE OF SUBCLAVICULAR PALPATION.

Dr. Hottenier calls attention to the value, from a diagnostic point of view, of bimanual palpation of the upper part of the chest. A congestive process limited to the apex may not be distinguishable at its commencement by percussion and auscultation. In such a case Dr. Hottenier recommends the following manoeuvre: While one hand is applied over the subclavicular region and the other is maintained over the corresponding scapula, the to-and-fro respiratory movements are followed by the two hands, and a moderate degree of pressure is exercised by the pulp of

the fingers in front during inspiration. Should no pain be thus elicited, no appreciable lesion of that apex exists. Should the patient, on the contrary, complain of pain, it is a proof that congestion is present.—*Lancet*.

MEAT EATING AND BAD TEMPER.

One deplorable result of excessive meat eating is the ill-temper which is said to be a chronic complaint in England. "In no country," declares Mrs. Ernest Hart, in the *Hospital*, "is home rendered so unhappy and life made so miserable by the ill-temper of those who are obliged to live together as in England. If we compare domestic life and manners in England with those of other countries where meat does not form such an integral article of diet, a notable improvement will be remarked. In less meat eating France urbanity is the rule of home; in fish and rice-eating Japan harsh words are unknown, and an exquisite politeness to one another prevails even among the children who play together in the streets. In Japan I never heard rude, angry words spoken by any but Englishmen. I am strongly of opinion that the ill-temper of the English is caused in a great measure by a too abundant meat dietary, combined with a sedentary life. The half-oxidized products of albumin circulating in the blood produce both mental and moral disturbances. Brain-workers should live sparingly, if they would work well and live long. Their force is required for mental exertion, and should not be expended on the task of digestion, for 'they should remember that the digestion of heavy meals involves a great expenditure of nerve force.' The healthful thing to do is to live an active and unselfish life, on a moderate diet, sufficient to maintain strength and not increase weight."

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

BRONCHIECTASIA APICIS PULMON. DEXTRI. PNEUMOTOMIC. CURE.

A man, 43 years old, who had been sick for five weeks, beginning with fever, stitch in the right side, and then profuse expectoration of fetid-smelling sputum. The examination gave symptoms of a cavity in the region of the right second intercostal space, near the right margin of the

sternum. An incision was made parallel to the rib, 9 cm. long, and the pleura laid bare. The point of a paquelin was then driven into the lung, and a large quantity of stinking pus allowed to exude. The wound was left open, and the case progressed normally until a cure was established and the auscultory conditions again normal.—*Prof. Hofmoke in Centralb. fur Therapie.*

SALICYLATE OF SODA PER RECTUM.

In all cases where salicylate of soda disagrees with the stomach, it can be administered per rectum without any difficulty. In the clinic at Munich, after an evacuating enema, the following mixture is injected pretty high up in the bowel: $1\frac{1}{2}$ to 2 drachms of salicylate of soda; water, 3 oz., and a pretty large dose of Tr. opii to prevent irritation of the bowel.—*Centralblatt fur Therapie.*

TREATMENT OF NEURASTHENIA, MELANCHOLIA, AND EPILEPSY BY INJECTIONS OF NORMAL NERVE SUBSTANCE.

Prof. V. Babes, of Bucharest (*Therapeutische Monatshefte*), says this method of treatment is contraindicated in irritable conditions, inflammations, and degenerations of the nervous system; but good success has been attained in neurasthenia, melancholia, and epilepsy. The fluid is prepared by rubbing up one part of the gray substance of freshly-killed sheep's brain with five parts bouillon, or a six-tenth per cent. solution of table salt, and straining through gauze or mull, everything, of course, being done aseptically. Each patient received about thirty-five injections, one every second or third day.

W. L.

POSTURE IN THE TREATMENT OF ACUTE PLEURITIS.

Dr. Volland, in *Therapeutische Monatshefte*, says that if the patient is kept absolutely quiet on the back in bed, the whole course of the disease will be shortened. Exudation will be much less, absorption much more rapid and certain, and operative procedure much less often required. He is as particular about avoiding change of position as he would be in a case of peritonitis or fractured thigh, because, he says, with every change of position of the body—as from the back to the side, or from lying to sitting—there is a change in the location of the fluid. This necessitates an expansion of the part of the lung which has been contracted by the pressure of the fluid, and a contraction of the lung in the new locality; and, as this expansion cannot take place rapidly, there is a tendency to a vacuum, and a consequent suction force which, acting on the fluid in the greatly increased and enlarged vessels of the inflamed pleura, causes a transudation and increase of the effusion.

If slight adhesions have already formed, change of position may tear them, and thus tend to increase the inflammation.

Change from lying to sitting posture is also very exhaustive, and increases largely the already too rapid pulse and respiration. He gives very little medicine; small hypodermic injections of morphine to relieve the pain, if severe, is the principal thing. He especially avoids anything that might cause vomiting.

W. L.

Salicylate of soda is highly recommended by Koester in acute pleurisy. The fever diminishes, and absorption begins rapidly. He gives fifteen to thirty grains three or four times a day.

PIPERAZIN IN DIABETES MELLITUS.

Dr. H. Hildebrandt, of Elberfeld (in *Therapeutische Monatshefte*), has made some experiments with piperazin in diabetes. He gave phloridzin to a dog to cause the diabetes, and then, while administering both the phloridzin and piperazin together, found that the secretion of sugar, as well as other diabetic symptoms, ceased. He also gave it to a patient suffering severely from diabetes, in doses of about seven grains three times a day, and found, after fourteen days' treatment, that the sugar had decreased from eight per cent. to three per cent., and that the objective symptoms, as well as the nutritive condition of the patient, had improved.

W. L.

SALOPHEN.

Salophen seems to be gaining in favor as a remedy in both acute and chronic rheumatism. In doses of one to one and a half drachms daily, it is equal to salicylate of soda in giving relief, and has the advantage of being tasteless and not disagreeing with the stomach.

W. L.

TREATMENT OF MYXODEMA.

J. Henry reports a case of myxedema of fourteen years' standing treated by injections of thyroid extract with marked success; but, on account of the injections causing syncope on two occasions and an abscess on another occasion, he resorted to feeding the patient one lobe of the thyroid gland of a sheep every second day. This method prevented the return of the edema, but had not the same effect on the temperature as the injections had.

J. Shapland gave a patient who showed the first symptoms of the disease ten years before, for two months, the half of a gland every morning, raw, to eat, with very good success.

H. Benson prefers giving the extract internally by the mouth, on account of the greater certainty of the amount given. He gives ten to fifteen drops twice a day.

W. L.

MORBUS BASEDOWII (GRAVES' DISEASE).

The treatment of Graves' disease (exophthalmic goitre) seems to be passing more and more into the domain of surgery.

Lemke, in *Therapeutische Monatshefte*, reports that his first two cases, reported in 1891, still remain free from palpitations and exophthalmus, and he reports three new cases treated by semi-lateral extirpation. One died, some months after the operation, of influenza and edema of the lung. In the other two—one of which was a complete picture of Graves' disease, the other only palpitation and goitre—the symptoms have entirely disappeared. He prefers extirpation of one-half of the gland to Koch's plan of ligating the thyroid arteries.

Kroenelin reports three cases treated by partial extirpation which are now, after a year and a half, completely cured. He has since treated twenty-nine cases in the same way, twenty-two of which are completely cured.

Wette, who has had abundance of material, concludes that the struma is one of the most essential causes of morbus basedowii, and that the best and most effective treatment exists in the partial removal of the goitre.

Dreesmann reports three cases treated by ligating the four thyroid arteries with complete success, and says that the choice of operation, whether extirpation or ligation, can only be decided by a large amount of material.

ICHTHYOL.

A remedy which, by comparison, is as new as cantharides is old is ichthyol, yet its great value in a very wide range of cases is so well recognized that it is largely used. Its use has been to a great extent practically empirical, since even now we scarcely know more of it than that it acts differently from all compounds containing sulphur. So far, it seems probable that the wonderful power of ichthyol in dispersing indurations and swellings depends upon its power of dissolving the intercellular cement substance, and so setting free newly-formed cells, so that they are readily dispersed.

Whatever the explanation of its action may be, it will certainly give good results both when applied to acute and inflammatory processes. An ichthyol dressing of twenty-five per cent. ichthyol and seventy-five per cent. lanolin, in cases of erysipelas, is the best application by long odds with which I am acquainted, and in acute articular rheumatism forms the

most efficient application for the relief of the heat, swelling, redness, and pain. In this disease as strong an ointment as fifty per cent. is often better than one of twenty-five per cent. After it is applied, the affected part should be wrapped in patent lint heavily smeared with the same mixture. From its use in a large number of cases of acute rheumatism, I have learned to regard it as a remedy almost as valuable as the salicylates. For the purpose of relieving indurated glands, as after bubo or cervical adenitis, or the limbering up of the sheaths of muscles stiffened by strain, cold, or rheumatic tendency, ichthyol has certainly a most important place. Similarly, I have frequently seen ichthyol remove obstinate skin affections either when they were dry, superficial, and scaly, or when, through chronic eczema, marked subdermal induration arrested the healing process. Of the internal use of ichthyol I can speak but little. Although continental writers claim good results from its employment internally, the few cases to which I have given it have not seemed much benefited.—*Dr. H. A. Hare, in Therapeutic Gazette.*

CALOMEL SOAP IN THE TREATMENT OF SYPHILIS.

Watraszewski (*Annales de Dermatologie et de Syphilographie*, vol. iv., 1893) describes the preparation of the soap as follows: The calomel, in the form of vapor, is mixed with a potash soap, in strengths of one to two and one to three. It forms a soft mass of a white color.

From two to three grammes of the soap should be rubbed in every day.

The inunctions should be carried out in the following manner: The parts to be rubbed should first be washed with ordinary soap and water, and, the patient then having taken a bath, the soap should be applied and rubbed in with a rotatory motion of the hand for from ten to fifteen minutes.

The advantages claimed for this method of treatment are as follows:

- (1) Its application takes but little time.
- (2) The soap is odorless and colorless, and it does not soil the linen.
- (3) The inunctions never irritate the skin, except when applied too often in the same region.

The rapidity of cure corresponds in time to that resulting from the use of blue ointment.—*Therapeutic Gazette.*

CREOSOTE ENEMA IN PHTHISIS.

In Poland, Drs. Chrostowski and Wislocki, of the Hospital St. Roch, Warsaw, have treated fourteen patients with creosote, to whom about eight hundred enemata were administered. The quantity of the remedy thus given was from one to four grammes in the twenty-four hours. The definite conclusions are:

(1) That enemata are very convenient as a means of administration of such large doses.

(2) That the results obtained in the treatment of phthisis with large doses of creosote speak in favor of the theories of Seixert and Haelscher (or Hollszer?), who consider this remedy as an effective means of neutralizing the pernicious influence of tuberculous toxine on the organism.

(3) That all forms of phthisis cannot be treated with large doses of creosote. The best results are reached in those cases which develop rapidly when nutrition still exists, though considerably diminished. It may also serve for the fibrous form where there is complete failure of nutrition.

(4) That in gradually administering augmented doses of creosote, the appearance of a greenish color of the urine should serve as an indication. These results again point to *guaiacol carbonate* as likely to become a most important remedy in phthisis, guaiacol being the active principle of creosote, and guaiacol carbonate being a preparation of it which is non-irritating to the mucous membrane, as creosote and carbolic acid are.—*The Monthly Magazine.*

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

TREATMENT OF WOUNDS WITH IZAL.

Mr. William Bruce Clark, M.B. Oxon., F.R.C.S. Eng., has lately been experimenting with a new substance in the treatment of wounds. The following is an abstract from his paper on the subject, which appears in a recent issue of the *Lancet*:

In November of last year Dr. Klein mentioned to me that he had been making some experiments with a new substance called "izal,"* which exhibited very remarkable disinfectant properties, was non-irritant, and had at the same time no poisonous influence on any of the higher animals, even in extremely concentrated solutions. After carefully reading Dr. Klein's report on the subject, and the account of his experiments, and

*The substance was at that time known by the term of the "Thorncliffe disinfectant." It has since been renamed "izal." It is a by-product obtained by Messrs. Newton, Chambers & Co., of the Thorncliffe iron works and collieries, Sheffield, in the process of coke formation.

after conferring with him upon the subject, I determined to test its efficiency and its applicability as a surgical disinfectant, and now, after some six months' trial, I am anxious to record the result of my investigations.

The cases in which I have used it have been selected by me because their behavior under the more commonly used antiseptics is so well known that it may be regarded almost in the light of a control experiment as regards this new disinfectant. The samples of the fluid which were submitted to me were diluted down to a strength of 1 in 50, and kept in bottles ready for use, the subsequent dilution to 1 in 200 being effected at the actual time of operation. The sponges which were to be used at the operation were cleansed, as is my ordinary custom, in soda and water, and then rinsed several times in fresh water until they no longer caused any turbidity in it. After this they were placed in a jar of izal (1 in 200), and kept there for at least twenty-four hours before use. The gauze which was employed as a dressing was the ordinary gauze of commerce boiled for twenty minutes in a saucepan over the fire, and then soaked for twenty-four hours, at least, in a solution* of izal (1 in 200) like the sponges. The gauze was wrung out just before use and placed in a moist condition over the wound, without the intervention of any protective or other similar substance between it and the wound. A sufficient number of folds were used to allow for any possible soakage that could take place, and the outside was then covered by any substance—*e.g.*, cotton-wool, etc.—which happened to be at hand in order to prevent the bedclothes from being wetted. The instruments were immersed in the same fluid for a quarter of an hour, and one's hands disinfected in it in the ordinary manner. As I am rarely in the habit of using ligatures, and usually employ torsion in their stead, I have not made use of ligatures prepared in this fluid on more than a very few occasions; but whenever I have done so the ligatures have in no single instance given the slightest trouble, nor have they in any way retarded the healing of the wound, so that one may fairly conclude that it is at least as efficacious as carbolic acid for the purpose.

The cases in which I have made use of this fluid may be described under the following heads: (1) Fresh operation wounds which were uncomplicated by ulcers, sinuses, etc.; (2) cases demanding special purification, *e.g.*, ulcers, etc., in which skin grafting by Thiersch's method was em-

*I have used the word "solution" here and in all subsequent instances in reference to this fluid "izal," but to be strictly correct the word "emulsion" should be employed, and herein lies, in my opinion, at once the chief advantage and disadvantage of the fluid in question. Being an emulsion and not a clear solution, it is not so easy to see one's instruments when they are covered by it. At the same time, it must be borne in mind that the very fact that the fluid is so singularly unable to form chemical compounds with living animal tissues is in all probability highly advantageous from the germicidal point of view. Unlike corrosive sublimate, which speedily loses its disinfectant power by combining with the albuminous substances of the body, izal retains this power in such a remarkable degree because it will not combine with anything. It is also at the ordinary temperature of the air practically non-volatile, as may be easily tested by placing a few drops on a piece of cotton-wool, and leaving it for several months in an exposed position.

ployed ; (3) abscesses and sinuses of varying degrees of complexity, all of which were either septic to start with or at least contained pus ; (4) sinuses in connection with mucous membranes, including fistulæ in communication with the urethra, and a case of prostatic abscess opening both into the rectum and bladder ; and (5) foul mucous membranes, such as bladders in a condition of cystitis, and mouths rendered foul by operations undertaken in their neighborhood.

(1) *Fresh operation wound.* The first case in which izal was employed by me was an ordinary case of breast cancer. The wound healed completely under a single dressing, and no pain was experienced by the patient after the operation. The same remarks apply equally to two cases of radical cure of hernia. The first was of a simple nature, but the second was complicated by the presence of a large sac and a fair number of adhesions, but no subsequent pain was experienced. The wound assumed an aseptic course throughout. In a case of goitre in which the fluid was applied, one-half of the gland, which was of considerable size, was dissected out and the fluid very freely used to the interior of the cavity. The jugular vein and recurrent laryngeal nerve were both exposed at the time, and were freely bathed with izal, but the subsequent course of the case left nothing to be desired ; and this is the more noteworthy, as with carbolic acid and corrosive sublimate there is often considerable constitutional disturbance—an occurrence which has been ascribed by some surgeons to the influence which these substances exert on the cardiac nerves, which are derived from the vagus and pass down the neck.

(2) *Skin grafting.* Where large portions of skin have been lost through ulceration, or in consequence of some extensive removal of a tumor, the skin can be speedily restored by the transplantation of skin after Thiersch's method. This method is, however, liable to fail owing to the difficulty of cleansing the surface, and it sometimes happens that the operation has to be performed a second time in order to ensure success in consequence of the difficulty which is experienced in thoroughly purifying the surface of the ulcer and the surrounding skin with the antiseptics ordinarily in use. On the three occasions on which I have employed izal for this purpose healing has taken place readily, and without the slightest difficulty.

(3) *The purification of abscesses and old sinuses.* For this purpose the antiseptics in ordinary use are of little avail unless the surfaces are very thoroughly scraped, and it is not always possible to effect this satisfactorily. This is especially the case with smaller sinuses, which often remained unhealed for weeks after the major portion of the wound has become cicatrized. I first employed the fluid for washing out a psoas abscess and an abscess in connection with the hip-joint. In both cases the pus was

first evacuated, and the cavity was subsequently flushed out with hot izal (strength 1 in 200). Both the abscesses healed without further trouble, and no subsequent constitutional disturbance ensued. I next made use of it in the case of two sinuses, one in connection with an old palmar ganglion which had become inflamed and burst externally, the other being situated in the region of the loin and of uncertain origin. Both were well distended under pressure with the fluid, and both healed completely about ten days later. These two results are amongst the most striking which the employment of this fluid has yielded. The patient with the palmar ganglion had been attending amongst my out-patients for several months, as well as having been in hospital on more than one occasion, and all efforts which had been directed towards healing the sinus had failed. Several times it had become inflamed, and had necessitated fresh incisions being made in the palm. After the cavity had been hyper-distended with the fluid some considerable pain and uneasiness were experienced for upwards of forty-eight hours, after which it gradually subsided, and a soundly healed hand was the result. The other sinus cannot be regarded as being so striking an instance of the efficacy of the fluid, for, though it healed rapidly, its nature and exact extent were shrouded in mystery. After so excellent a result in the two sinuses just mentioned, I employed the fluid in the same strength in a case of suppurating knee-joint. The joint in question was freely opened, and was thoroughly scraped and flushed out. For a few days the pus diminished in quantity, the temperature fell, and the tenderness of the surrounding parts was lessened. The effect, however, was only temporary in character. The process was repeated a second time with double strength izal, viz., 1 in 100, but with no better permanent result. As each of these applications involved placing the patient under an anesthetic, it was not deemed advisable to make any further attempts at disinfection, and accordingly in this case izal was no longer employed, and the joint was drained in the ordinary manner.

(4) *Sinuses in connection with mucous membranes.* Some of the sinuses of this nature with which one has to deal from time to time may be classed amongst the most tiresome which are encountered in surgery, and, perhaps, amongst the most troublesome of all are those fistulæ which are in connection at the same time with the urethra, prostate, and bladder. The first case of this nature in which I made use of izal occurred in a patient who had a perineal fistula subsequently to urethral stricture. Though the calibre of the urethra was fully restored, the fistulous track refused to heal. It had been dilated, scraped, and injected with various fluids, such as chloride of zinc, nitrate of silver, carbolic acid (1 in 20), etc., but all alike had failed, and rarely a day passed without a certain amount of urine trickling out of the fistula. It was injected with izal, and a week later the

urine ceased to come by the false track, which has remained permanently healed ever since, *i.e.*, for more than three months. The second case was that of a prostatic abscess which had burst both into the rectum and the urethra. A lateral cystotomy was performed, the cavity scraped out with the finger, and freely irrigated with the fluid. The wound completely healed in about five weeks without leaving any fistulous track behind.

The effect of izal on mucous membranes. It only remains to allude to the effect of the fluid on mucous membranes; for example, when it is made use of in cases of cystitis, or as a mouth and throat wash after operations on those parts. In all such cases, it has invariably proved of the greatest benefit. Whilst it produces little or no irritation like carbolic acid, it is considerably more efficacious, and can, of course, readily be employed in inflammations of the mouth, nose, and throat, where a poisonous substance like corrosive sublimate is quite inadmissible.

Concluding remarks. From a consideration of Dr. Klein's experimental researches in connection with the substance, and from my own practical experience of it, I have no hesitation in saying that the antiseptic in question seems likely to prove more efficacious practically than any at present known. It will be obvious to any one who peruses critically the account of the cases in which I have employed it that in many of the instances referred to it was put to a very severe test, and that by its aid some excellent results were obtained. At the same time, it is equally clear that its behavior under all circumstances must be submitted to the test of a more lengthy experience before one can be in a position to predict that exact place which it is destined to take amongst the antiseptic fluids of the future. One thing, however, is certain, *viz.*, that the surgeon will rejoice to hear that at last an antiseptic has been found which is easy to use, does not irritate his own hands or his patient's skin, and is, at the same time, by far the most powerful with which he is yet acquainted.

SPINAL SYMPTOMS AND PHIMOSIS.

A curious and interesting condition is described by Solon Chomatianos in the *Progrès Médical*, and an abstract of the papers appears in a recent number of the *Neurologisches Centralblatt*. The patient was an officer aged fifty-eight, who had always enjoyed good health, and had never suffered from syphilis. His symptoms consisted of incontinence of urine, paresis of both lower extremities, ataxy in walking or in standing with his eyes closed, loss of the knee-jerk, and finally immobility of the pupils to light. The patient suffered from phimosis, which had followed balanitis of two years' duration. There was no other sensory change or symptom of spinal disease, and after the phimosis had been relieved all the symptoms disappeared, and the patient completely recovered.—*The Lancet*.

BACILLUS COLI COMMUNIS.

Dr. Rosswell Park (*Annals of Surgery*), concluding an exhaustive and thoroughly practical article upon this subject, says :

This organism, which is constantly present in the alimentary canal, is not always a harmless inhabitant, but becomes at times an active invader. It does not confine itself alone to the intestinal mucosa, where it may set up most active desquamative lesions, but may pass this barrier and penetrate into the general circulation and exercise pernicious activity in numerous other organs, with toxic effects upon the system at large.

Paraplegia and other paralyses are known to be sequelæ of colon infection of various abdominal viscera ; kidneys, liver, etc.

Herniary cholera, so called, is due to intoxication from the toxic products produced from the organism in its virulent condition.

While still confined to the alimentary canal, under certain conditions, it may give rise to infarcts as well as ulcerations, their gravity depending largely upon the activity of absorptions of toxic products.

From the intestinal canal the colon bacillus may ascend along the biliary passages, determining at one time cholecystitis, angiocholitis, and local necrosis, or at another multiple abscess in the liver.

It is known to be one of the frequent factors in peritonitis of intestinal origin. It ranks among the most active agents in case of urinary infection, *e.g.*, cystitis, pyelitis, pyelo-nephritis, etc. Without going minutely into the question of identity of various bacillary forms found in the urine, especially in cases of septic urinary affection, it would be enough for the present purpose to insist that in the kidneys, as well as in the bladder, the colon bacillus may exert active pathogenic and pyogenic properties, and may be the active agent in producing cystitis, suppurative pyelitis, and their kindred disturbances, as well as pus elsewhere, general infection, and intoxication. These organisms may be introduced from without, as upon a catheter, or may be transferred from their normal habit by some traumatism, or by natural channels. In animals, at least, these microbes are in some measure eliminated by the kidneys after being injected into the circulation. The endocardium, the meninges, the pleura, articular serous membranes, and the lungs, are at times not exempt from the manifestations of its activity.

When ordinary antiseptic precautions are observed, it is probably the most powerful enemy with which the laparotomist has to contend. This fact gives plausibility to the views of those who claim that the best preparation for abdominal section is free catharsis for a few days previous to the operation. The researches of the past two or three years with regard to this organism have certainly justified the views which I have held and taught for some years, that there is a form of post-operative septicemia

which is due in no direct way to the operator or the operation, but is, in fact, that which it has often been called, *i.e.*, entero-sepsis, or intestinal toxemia, a genuine auto-intoxication, active and actual lesions being due to migration from the intestinal canal of the colon bacillus. The necessary inference from this is that constant attention to the intestinal canal should be the watchword of the surgeon, both in his preparation of patients for operation and his care of them thereafter. For a widespread recognition of these facts I have elsewhere and more than once contended, but feel that the profession at large are not yet fully alive to their importance.

If I may sum up the conclusions of Macaigne, with which he terminates his excellent monograph, they are briefly as follows :

The colon bacillus has been identified with the bacillus Neapolitanus of Emmerich, the bacillus fetidus of Passet, the bacillus pyogenes of urinary infection of Albarran and Clado, and the bacillus lactis erogenes, and perhaps with other forms described by other authors.

Ordinarily inoffensive, it may from causes not yet ascertained acquire a greater or lesser degree of virulence, according to which it may determine one or more of the following lesions :

I. Infectious enteritis.

(a) Acute form.

(1) The algid forms : cholera nostras, cholera infantum.

(2) The pyretic form : post-puerperal pseudo-infection, etc.

(b) The chronic form.

(1) The wasting enteritis of children and of adults.

II. Dysentery.

Then, if the intestinal barrier is broken down, we may have peritonitis and herniary cholera. *Probably most, if not all, cases of appendicitis belong also under this head.*

The ascent of the colon bacillus along the biliary passages may provoke, according to its virulence, (1) simple biliary infection, (2) acute aundice, (3) suppurative angiocholitis.

In the alimentary canal it is capable of provoking—in the mouth, false membrane; in the stomach and intestines, infarcts; and lower down, perirectal abscesses. The bacillus penetrating the intestinal mucosa may infect parts or organs at a distance; for example, the endocardium, the thyroid body, the lungs, etc.

Finally, the bacillus may in some way, not yet fully understood, provoke meningitis, urinary infection, pulmonary and articular lesions.

ILLUSTRATIVE CASES FROM THE PRACTICE OF THE AUTHOR.

CASE I. *Cancer of the intestine, with abscess.* H.C.G., aged twenty-two, was taken sick, apparently with dysentery, during which he rapidly

emaciated and developed a tender, painful tumor to the left of and below the umbilicus. This tumor was watched some time, and finally showed evidence of the presence of pus. It was opened, under ether, and some 75 c.c. of foul-smelling pus evacuated from apparently a subperitoneal cavity, around which there was considerable induration. This cavity closed, then reopened, the tumor grew in size, and subsequently proved to be of malignant character, involving several loops of intestine in one firm, dense mass. The case was under the care of Dr. D. W. Harrington, and the operation was made by myself. In the pus from the above abscess no organism could be found save the colon bacillus.

CASE II. *Recurring peri-appendical abscess.* H.T., aged forty-eight. This patient was operated on April 8th, 1892, for acute peri-appendical abscess. In November, 1892, he returned with another large abscess pointing externally in the old scar. The appendix had not been removed during the first operation, for the reason that it could not be found without what seemed to be injudicious disturbance of the parts. November 26th the patient was operated on the second time, and nearly a pint of material evacuated. The pus from this case gave a pure culture of the colon bacillus, which, however, showed no special virulence.

CASE III. *Acute abscess of the liver.* J.C., aged thirty-three. Four weeks previous to entering the hospital he was seized with sharp pain in the right side, which caused him to give up work. Since then he has been very sick, and was brought to the hospital four days before the operation with a temperature often as high as 106° , with frequent chills, great soreness, and some swelling in the region of the liver. Referred to me by Dr. Chas. Cary, December 28th, 1892. I anesthetized him and evacuated a very large abscess in the liver by incision between the tenth and eleventh ribs, just back of the axillary line. At the time of the operation about twenty-five ounces of thick, ropy pus slowly escaped. The temperature at once subsided, to remain low, and he made a rapid recovery. In his case the pus was a pure culture of the bacterium coli commune.

CASE IV. *Gangrenous appendicitis.* H.W., aged sixteen, was sent to the hospital by Dr. S. G. Dorr. This was a case of gangrenous appendicitis of eight days' duration. Although the appendix was found gangrenous at the time of the operation, the patient had never seemed very sick. Two days before the operation he was able to walk, and when I first saw him, the day previous, he moved in bed without pain, and was not extremely tender, although the tumor was as big as my fist. From this, on the following day, several ounces of fetid pus were evacuated, and the appendix, almost completely gangrenous, was easily removed. He only stayed eight days in the hospital, and then went home nearly recovered. Pus from this case showed nothing but colon bacilli.

CASE V. *Acute appendicitis, with perforation and obstruction of the bowels.* H.J., aged forty-eight, gives a history of three attacks within the recent past of pain and soreness in the right iliac fossa. January 13th, 1893, he was taken with very severe pain, and became a patient with Drs. Greene, with whom I saw him four days later, when he had fecal vomiting and all the signs of intestinal obstruction, but without any localized tenderness. The same day I operated, and after opening in the middle line, on exploring toward the right iliac fossa, some slight adhesions gave way, and there came a gush of several ounces of fresh thin pus, having a strong fecal odor. As well as I could, under the circumstances, and by gaslight, I examined the region of the cecum, but could find there no definite lesion. The patient died about fifty hours later, and on autopsy there was found a gangrenous appendix with circumscribed gangrene of the adjoining portion of the cecum. Examination of the pus removed at the time of the operation showed colon bacilli, and nothing else.

CASE VI. *Cholecystitis suppurativa.* During the same week I was called out of town to see an elderly woman in whose case both the history and the local symptoms pointed to an acute appendicitis; in fact, every sign of it was present save perceptible tumor. She had had chills and high temperature, and the tumor had been distinctly perceptible in that region within a day or two. Her chills were followed by an alarming collapse. An operation was deemed necessary at once. When I saw her in the evening her temperature was down, and she had involuntary stools, and there was tenderness across the lower bowels. Under ether I made a long oblique incision over the appendix, and upon working my way down to it found it perfectly free and apparently normal. Exploring upward, I came upon a large distended gall bladder, and aspiration with a fine needle showed it to be full of apparently sero-pus. I closed the lower incision, made a second one over the gall bladder, sewed it to the peritoneum with four fine silk sutures, and left it to be opened the following day. The contents of the gall bladder, as withdrawn by the aspirating needle, showed a sero-purulent liquid which contained colon bacilli and streptococci. The patient made a final though slow recovery, over forty gallstones being later removed by Dr. Richmond, of Fredonia, N.Y.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor., L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital; Physician to House of Providence and Home for Incurables; Assistant Pathologist, Toronto General Hospital.

THE PRESENCE OF A VALVE AT THE NECK OF THE BLADDER.

Dr. Opert states that the presence of a valve at the neck of the bladder, without being associated with diseases of the prostate and bladder, is not uncommon. Mercier assumed that the condition existed only in old people, and operated with the best results in over three hundred cases.

Von Dittel denies the statement that it is not dependent upon prostatic hypertrophy, but believes that it is due to a spasmodic contraction of the prostatic ring or internal vesical sphincter.

Socin claims that the causes may be either hypertrophy of the bladder as a result of stricture of the urethra, or tumors of the bladder, etc., and as a result of the hyperplasia a bundle of transverse muscle fibres is raised up, and possibly proves a hindrance to perfect micturition.

Eigenbrodt reports the case of a man, twenty-four years of age, who, since boyhood, had suffered from difficult urination, so much so that at times the urine could only be voided by great straining. Examination of the urethra with the ordinary catheter was impossible, as only the smallest soft instrument could be made to enter the bladder. The first examination of the urethra was followed by complete retention, and all ordinary measures to relieve the same proved fruitless. As a last resort, the urethra was opened in the perineum, a sound was easily passed until it reached the neck of the bladder, when further attempts at introduction were resisted. A small sound, with a sharp curve, was next tried, and, after considerable manipulation, it entered the bladder; a catheter was then passed along this sound as a guide, and allowed to remain in the wound. Two days later the patient died, and at the *post mortem* the following conditions were found. The bladder was greatly dilated, and the contained urine was purulent. The urethral orifice was covered by a transverse, half-moon shape fold of mucous membrane. This fold consisted chiefly of mucous membrane; the base being somewhat thicker, contained muscular fibres, probably a part of the sphincter muscle. The prostate was normal.—*University Medical Magazine*.

VON WEDEKIND ON THE TREATMENT OF GONORRHEA WITH
HYDROGEN PEROXIDE, UNDILUTED.

After an experience with nine cases, the author claims most excellent results with this treatment. The patient is put upon potassium acetate,

gr. xx., four times a day, and is directed to use, as an injection, hydrogen peroxide, undiluted, 10-volume strength, five times in twenty-four hours. He directs that the injection be held in the urethra for about five minutes. In the entire nine cases the disease was aborted.

"The use of this drug in the early or incipient stage of gonorrhea, I believe, will cause the disease to remain a local trouble, prevent the absorption of the septic material; in other words, prevent gonorrheal septicemia by the removal of the hotbed of infection, as it is supposed to do in diphtheria."

Cases which have been discharging for more than two days cannot be aborted.—*New York Medical Record*.

[I have used the peroxide in a few cases, and am quite confident that in at least two the treatment was responsible for a resulting epididymitis. If the urethritis has become posterior, the danger is increased many fold. Peroxide of hydrogen will ferret out pus, and, should it commence its action in the deep urethra, around or near the opening of the seminal vesicles, there is great danger of an inflammation spreading along the cord. It is a dangerous remedy in tubes or cavities that do not possess a free opening.—E.E.K.]

METHYL BLUE IN CYSTOSCOPIC DIAGNOSIS.

Kutner (in *Deut. Med. Wochensch.*) reports that he has utilized the fact that methyl blue is excreted by the kidney unchanged, and therefore gives a pronounced coloration to the urine, to facilitate the discovery and examination of the ureters in cystoscopic examinations. His method is to exhibit from fifty to seventy centigrammes of methyl blue two or three hours before the examination, by which time the urine will have become deeply colored. The bladder is then thoroughly washed and filled with a clear solution of boric acid, when the colored fluid ejected from the urethral orifices is very easily observed. The passage of the blue dye through the kidney does not deprive it of its power to color living cells, so that the epithelium at the base of the bladder soon becomes deeply stained. In view of the fact that at times the openings of the ureters are extremely difficult to find, even after the bladder has been opened, it is probable in such cases that this method will prove of great assistance.—*International Medical Magazine*.

BLOOD CHANGES IN SYPHILIS.

Neumann and Konried (*Wiener klin. Wochenschrift*) have made a study of the blood in all stages of syphilis, with the following results:

(1) The hemoglobin is diminished in the primary stage from fifteen to thirty per cent. It remains diminished during the first part of the erup-

tion and in early treatment, but as the mercurials are pushed it rapidly regains its normal percentage.

(2) Older, contracted cases of secondary syphilis have only from forty-five to seventy-five per cent. of hemoglobin. The anti-syphilitic treatment in these cases increases the hemoglobin, but does not raise it to normal.

(3) The late forms of tertiary syphilis are characterized by a low hemoglobin percentage, which improves under mercury.

(4, 5, 6) The red blood corpuscles are not diminished in the primary affection, but when constitutional symptoms appear they are reduced one-third. Anti-syphilitic treatment brings them back to normal. Non-treated secondary forms have about one-third the normal amount, which becomes normal under treatment. In the tertiary stage there is some diminution. The number becomes restored by treatment.

(7) The number of white corpuscles are diminished in proportion to the diminution of the red corpuscles.—*Medical and Surgical Reporter*.

ANURIA FOR ELEVEN DAYS, WITH RECOVERY.

During (*Internationales Centralb. f. die Physiol. u. Pathol. der Harn. u. Sexual-Organen*) has reported the case of a man, sixty years old, who had suffered for a number of years from gout and renal colic, the urine at times containing small calculi. On one occasion the man was seized with severe pain in the left loin and in the course of the left ureter. The testicle of the same side was retracted. A few drops of urine were passed from time to time at long intervals. There was also vomiting. From this time no urine was passed, despite the efforts of the patient. The bladder was found to be empty. Warm baths, douches, massage, and diuretics were employed, but without avail. On the third day uremic symptoms appeared: vomiting, eructations, somnolence, depression, restlessness, thirst, anorexia. In a short time copious diarrhea set in. On the eighth day the man's condition became alarming, the uremic symptoms becoming more pronounced. This condition continued until the eleventh day, when, while straining at stool, a large amount of bloody urine was passed by the urethra. The urine was not preserved and a possible calculus could not be looked for. During the first ten or eleven hours between twelve and fifteen quarts of urine were passed. The threatening symptoms at once subsided, and in the course of forty-eight hours the patient felt as well as usual.—*Medical News*.

THE RÔLE OF THE POSTERIOR URETHRA IN CHRONIC URETHRITIS.

Dr. Bransford Lewis, of St. Louis, in a paper read before the American Association of Genito-Urinary Surgeons held in Harrogate, on the above subject, arrives at the following conclusions:

(1) The causes usually given for the prolongation of cases of clap (the presence or absence of gonococci; strictures of large calibre; the use of certain drugs in treatment, etc.) do not satisfactorily explain them, nor do they furnish reliable means for prognosticating the outcome of a case.

(2) A single widely-prevalent cause for such prolongation of gonorrhea has as yet not proved its right to recognition as such.

(3) Posterior urethritis, by reason of its anatomical seclusion and inaccessibility to ordinarily prescribed treatment, if frequent, offers the best explanation for such prolongation or repeated recurrence.

(4) Scrutinizing clinical investigation shows posterior urethritis to be present in the great majority of cases of prolonged or severe gonorrhea; and

(5) Direct topical treatment to the posterior urethra is therefore necessary in the great majority of cases.

(6) The causes usually given as productive of posterior urethritis are not commonly found to be real factors in the clinic.

(7) The mode of onset usually described does not coincide with that discerned in clinical observation.

(8) These two latter observations confirm the probability that posterior urethral infection is accomplished through the lymphatics, which explains the frequency of such infection.

(9) Posterior urethritis is not a complication, but a natural phenomenon of gonorrhea.—*Journal of Cutaneous and Genito-Urinary Diseases.*

PEDIATRICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital
for Sick Children; Clinical Lecturer on Diseases of Children
in the Woman's Medical College.

DIABETES MELLITUS IN INFANCY.

Duflocq and Dauchez (*Rev. de Med.*, June 10th, 1893) record a case of diabetes mellitus in an infant aged eighteen months, terminating rapidly by coma. The symptoms which were observed when first summoned were great thirst, constipation, feeble uncountable pulse, cyanosis of the face, and emaciation. The illness was attributed by the mother to teething. The child had been ill about a fortnight, but its condition does not appear to have alarmed the parents. It grew rapidly worse, became comatose on the following day, and died in a few hours. Under two years of age diabetes mellitus is extremely rare, and the authors were able to find only two cases of coma on record. Külz and Leroux collected altogether 150

cases of diabetes mellitus in childhood ; of these, 9 were under two years of age. Berlioz, in 20,000 analyses of urine, met with sugar in the urine of a child—aged $3\frac{1}{2}$ years—only once. The authors point out that diabetes in infancy is generally very rapid in its course, and suggest that the disease may be compared to an infectious disorder.

MALARIAL FEVER IN A NEW-BORN INFANT.

In this case the presence of malaria was undoubted in four members of the family, and the origin of the disease in the infant also seems very certain. The first paroxysm appeared eighteen hours after birth, a time far too short for the disease to have been contracted by exposure. The *plasmodium malariae* was found to be present in the blood. The only element lacking for a perfect diagnosis was the failure to detect enlargement of the spleen.—*F. M. Crandall, in The Polyclinic.*

ACUTE INTUSSUSCEPTION IN AN INFANT EIGHT MONTHS OLD ; OPERATION : RECOVERY.

Patient was a well-grown male infant, in good health until onset of symptoms, which began suddenly, child screaming and stretching out its legs. The day following neither the feces nor flatus were passed. An examination showed tympanites and an elongated tumor in right linea semilunaris. Examination per rectum negative, but the bowel contained some blood. Under chloroform ten ounces of warm water were injected in lower bowel by rubber tube and funnel held at a height of two feet and a half. Abdomen was distended, but tumor not reduced. Injection repeated with twelve ounces of water held three feet high. Laparotomy was decided upon. An incision made five inches long in left semilunaris ; tumor removed from abdomen, the intussusception proving to be of the ileo-colic variety. There were no adhesions present, but the bowel was deeply congested and thickened. Patient was under the anesthetic thirty-five minutes, and was put to bed in good condition. Slight reactionary temperature to 102.2° F., but it soon subsided. Recovery uneventful. The following points were given in discussion of the case by the author :

It is futile to expect success in infants and children unless abdominal operations are done with the greatest expedition.

Shock is the great cause of fatality.

Peritonitis is generally caused either by infection during operation from without, or from the intestine, owing to rupture, ulceration, or gangrene. Neither should occur.

Injections of warm water should be tried under an anesthetic to accomplish reduction ; these are generally futile after forty-eight hours. They are successful only in ileo-colic, ileo-cecal varieties, and in those of rectum and large intestines.

The signs of acute intussusception are clear and unambiguous. They are acute intestinal obstruction plus the discharge of blood and mucus from the bowel, plus a tumor.

Blood is passed in half these cases, and a tumor is often felt either by the rectum or in the abdomen.

As regards safety in operating, the following procedures with the order of preference, as follows: Incision, incision and amputation, resection, and immediate suture, extrusion and artificial anus without resection, and artificial anus preceded by resection.

Resection with immediate suture is an ideal operation.—*C. B. Lockwood, F.R.C.S. Eng., in The Lancet.*

DIETETIC TREATMENT OF CONSTIPATION IN INFANCY.

Dr. E. Emmett Holt, in an article on the dietetic treatment of chronic constipation in infants, points out that in order that the bowels may move regularly there must be a certain bulk to the fecal mass. In the adult this mass consists of green vegetables, pulp of fruit, husks of cereals, etc. In infancy the mass of residue must be formed from fat and casein. The ideal stool of a perfectly healthy nursing infant contains in its dry residue, according to the latest and best analyses, from 20 to 40 per cent. fat; this being by far the largest single ingredient. This indicates that nature requires that the infant's food should contain much more fat than can be absorbed. The use of this excess seems to be to keep the bowels in proper condition. Habitual constipation among nursing infants is usually seen in those who are gaining slowly, or in those who do not thrive at all at the breast; and in these cases the examination of the milk, in the great proportion of cases, shows it to be deficient in fat. But not all infants who are habitually constipated do badly; some exhibit all the other appearances of healthy nutrition. It appears to be true in such cases that sufficient fat for the requirements of nutrition is supplied, but there is not sufficient excess to regulate the action of the intestine.

Constipation is the rule in infants fed upon cow's milk simply diluted with water, or upon condensed milk. Good breast milk contains an average of about four per cent. of fat; the average of cow's milk about one-half per cent. less. An infant who gets cow's milk diluted with an equal quantity of water gets one and three-quarters per cent. of fat instead of four per cent.; and if the dilution is two parts of water to one of milk, the fat will not equal one per cent.

What effect has this upon the stools? Since the fat is nearly all absorbed, they consist chiefly of casein residue, which forms hard, dry masses often resembling marbles. It is true that, notwithstanding such stools, and the great discomfort caused by the constipation, and the asso-

ciated flatulence, the child's nutrition may not suffer greatly, and he may be so well nourished that the mother, and often the physician, may take it for granted that the food is all right, and settle down to the use of laxatives or suppositories for the remainder of the first year. The increase of fat in the food in such cases has at once the effect of rendering them softer, yellow, and buttery in consistency. Starchy foods as a rule tend to increase constipation, for although they add to the bulk of the stool the condition of intestinal putrefaction which they set up in the end makes the constipation worse in most instances. This applies to barley water, farina, arrowroot, Imperial Gramm, Ridge's food, and all similar preparations.

In conclusion, Dr. Holt considers deficiency of fat in the food to be the chief dietetic cause of constipation in young infants. The constipation is aggravated if at the same time there is an excess of casein. If from the beginning a proper amount of fat, about four per cent., is furnished, the habit of obstinate constipation is not established, and the bowels are easily kept in proper condition. If, however, the constipated habit has become established, more difficulty is experienced in overcoming this, and the dietetic treatment may not suffice, but it is certainly the most important element in the successful treatment of every case.—*Archives of Pediatrics*.

PEROXIDE OF HYDROGEN IN DIPHTHERIA.

In the August number of the *Archives of Pediatrics*, Dr. Lewis Smith inquires into the use of peroxide of hydrogen in diphtheria. There is much evidence as to its beneficial action, and also as to its disadvantages. The composition of the fluid varies much, and the poorer qualities, intended mainly for bleaching purposes, are highly irritating from the acid they contain. In some cases this irritating property is so extreme as to give rise to a thin layer of gray membrane similar to that produced by any ordinary caustic. With other less acid solutions a redness or rawness of the surface is produced, accompanied by smarting and excessive secretion. Attention is directed to the frequency with which the use of peroxide is accompanied by hoarseness and indications of involvement of the larynx. The effect of these irritating solutions is to bring about the very condition most favorable to the spread of the diphtheritic infection. Dr. Smith conceived of neutralizing the solution by the addition of bicarbonate of soda, determining the quantity of the bicarbonate necessary by the use of litmus paper. By this means it was thought that the undoubtedly great germicidal and antiseptic properties of the drug might be taken advantage of without incurring the risk of promoting further extension of the membrane. He consulted the celebrated chemist, Dr. Squibb, of

Broocklin, but was informed that it was necessary to have the solution acid, as under other circumstances decomposition took place so rapidly that it would be impossible to keep it. But if the alkaline solution were added immediately before using, the acidity is removed and the germicidal effects of the peroxide in no way interfered with. Following out this idea, Dr. Smith has adopted this plan. He has three bottles, one containing Squibbs' hydrogen peroxide, a second containing a five grains to the ounce solution of bicarbonate of soda, and a third contains ordinary distilled water. A teaspoonful of each is mixed in the bottle of the atomizer immediately before using each time. An extra teaspoonful of water is used when spraying the nose.

SOIL IN SKIN DISEASE. *

Dr. Allan Jamieson considers that in chronic ringworm of the scalp, as well as in other skin affections, the condition of the soil is of very great importance. The disease, as a rule, to which exceptions are few, is met with in children from shortly after infancy till puberty is reached, at which era, or soon after, it seems, in the immense majority of cases, even though untreated, spontaneously to get well. Now, this is the period during which the sebaceous glands of the scalp, if not most active, are at least most liable to disturbance of function. During this time the hair is becoming thicker and stronger; indeed, the hair-producing energy of the system being expended almost solely in that era. While possibly it would be too much to say that seborrhea of the scalp is then most frequent, it is certainly more rapidly set up than later on. Once the trichophyton has established itself, a condition indistinguishable from the drier form of seborrhea, the pityriasis amiantacea of older writers, is set up, and this persists, unless kept in check by treatment, till, or in many cases even long after, the extinction of the parasite. So much is this the case that chronic ringworm in which the hair grows fairly well over the affected area is often mistaken for an ordinary example of dandruff. A form of seborrhea is therefore closely connected with tinea tonsurans capitis, and this is also supported by a fact which has come under my observation in the few instances in which ringworm of the head in adults has come under my notice, that in them the scalp was particularly scaly.

Again, in psoriasis a seborrheic element must be recognized in a very considerable proportion of instances. Unfortunately, I have no statistics of my own which bear on the age at which psoriasis is most frequent, but Nielsen, of Copenhagen, states that in 548 examples it was reported to have begun in 241, or 44 per cent., before the age of fourteen, showing a peculiar susceptibility of the integument to this complaint antecedent to

*Opening address at Dermatological Section, British Medical Association.

puberty. Again, alcoholism, which favors materially the development of a seborrheic condition, not only aggravates psoriasis, but induces the development of a worse type of the disease. In many cases we can easily determine this seborrheic element; and indeed it is difficult in a certain proportion to say whether they should be classed as seborrheic eczema or as psoriasis. This difficulty arises, perhaps, most often in connection with psoriasis of the scalp, but may also be encountered in cases where the complaint is principally or wholly confined to the trunk. Other examples, again, show little trace of this perversion of glandular activity. Dr. Byron Bramwell showed to the June meeting of the Edinburgh Medico-Chirurgical Society an instance of psoriasis which, when she showed herself at my out-patient *clinique* before her admission into his wards, presented a remarkable dryness of the skin, combined with a disposition to the production of, or transformation into, general exfoliative dermatitis. After treatment by thyroid feeding alone, and rest in bed, on which followed the separation of abundant flakes of dry cuticle, the skin eventually assumed a peculiar silky softness, accompanied by the total disappearance of the psoriasis. Here, so far as we can infer, the soil was directly influenced by the treatment, and to its modification we should ascribe the departure of the disease.

Lupus erythematosus is also associated with disordered sebaceous function, and though it is now agreed that the special inflammatory process, in which in so far as objective symptoms have revealed the disease mainly consists, does not necessarily start from the sebaceous glands or their investment of vessels, still, in many cases, we can easily convince ourselves that the scaly or warty accretion which forms is closely connected with the sebaceous gland system. The disorder may eventuate in destruction of these glands and of the hair follicles, leading to permanent alopecia and general aridity of the surface implicated. The resemblance, too, which some instances at least of lupus erythematosus exhibit to some of psoriasis must have struck many observers.

Lastly, there is an item in common to all these ailments from the therapeutic side. There are at least three remedies which act more or less beneficially on all alike. These are sulphur, chrysarobin, and pyrogallac acid. Sulphur in one form or another has been found to do good service in ringworm of the head and in lupus erythematosus, as well as in the cases of psoriasis in which the seborrheic element is most prominent. Though my own experience has not been great, authorities of note can be cited as to the alleged efficacy of pyrogallac acid in all three. In psoriasis the value of chrysarobin is undoubted; in tinea tonsurans capitis we have, among others, Duhring and Hutchinson ascribing to it the foremost place in obstinate cases; and quite recently the latter author has recorded some

most interesting examples of cure in lupus erythematosus from the prolonged use of weak ointments of the drug. Part, at least, of this beneficial action is certainly due to the influence these agents exert on the soil. We may not yet, it is true, have the power to affect the soil on which we labor in as powerful a manner as the agricultural farmer can his by means of slag-phosphate powder. This, according to Professor Robert Wallace, when applied to the poorest description of exhausted pasture land, is known to have a marvellous effect in softening and sweetening the herbage generally, but more especially in developing the growth of white clover—an essential preliminary to the production of a thoroughly good and dense cover of permanent grass. Our object is rather to restrain the fertility of the extensive flora dermatologica, which Dr. Unna has shown to be so plentiful on the skin. The care of the soil is a factor in this, attention to which, it is to be hoped, will not be wholly omitted in the discussions.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

DISTINCT SPECIES OF TRICOPHYTON IN HUMAN RINGWORM.

An interesting communication on this subject has been made by M. Sabouraud. He has found that so far, with scarcely any exceptions, the parasite of ringworm may be one or other of two kinds. In about sixty-five per cent. the hairs from the head of an affected child, when examined after immersion in liq. potassa of a strength of forty per cent., will, so far as diseased, be found to be filled with very fine spores hardly $3m$ in diameter. These are quite in juxtaposition, arranged irregularly, and without discoverable mycelium. They even transgress the covering of the hair so as to furnish it with a sort of external sheath. The patch of ringworm itself presents special characters; it is round or oblong, is not more than two inches in diameter, often less; its surface rises a little above that of the skin around; the derma is thickened and infiltrated. The affected hair is fine, as a rule, and as if atrophied; its fracture is longish. He has named this parasite *Tricophyton microsporon*. In the second variety, which forms about thirty-five per cent. of the cases, there are large spores lying in a visible mycelium, arranged in distinct lines in the mycelial branches. These branches are all included in the hairs, and do not form an enveloping sheath to them. The chief patch is rather large than small, irregular, and there are at its circumference tufts of

healthy hairs encroaching on the diseased. The patch itself is very bald, since the hairs break off very short. They are rather swollen than atrophied; often no more than a black point at the follicular orifice. Formulated shortly, if the hairs are thick and their fracture a short one, the spores are large, from $\frac{7}{8}m$ in diameter; if the hairs are fine, and their fracture long, the spores are small, and have a diameter of $3m$. The variety with large spores he has named *Tricophyton microsporon*. There is a close relationship between the obstinacy of the ringworm and the *Tricophyton microsporon*; in twenty cases the macrosporon was only found once, but it alone has been met with in tinea barbæ and in ringworm of non-hairy parts. According to Sabouraud's observations, if the macrosporon be found in the hairs of an affected child, the case may be pronounced curable in three to four months; not so if the microsporon be encountered; such cases are the intractable ones. Some exceptional cases were seen with parasites not completely conforming to the characters described; such were apparently instances of infection from animals.—*Annales de Dermatologie et de Syphiligraphie*.

ALBUMINURIA IN SYPHILITIC PATIENTS.

O. Petersen, of St. Petersburg, mentioned that in eighty-eight autopsies on syphilitics he had found lesions of the kidneys thirty-four times. In thirty-six cases where the fatal issue was due to syphilis alone, seven patients had succumbed to a chronic nephritis. The author examined the urine of syphilitics, and found that, in the secondary period, albuminuria exists in the proportion of three to eight per cent.—*The Universal Medical Journal*.

SUPPURATION IN THE BOVINE RACE.

A. Lucet (Pasteur Institute, Paris) has studied suppuration in cattle in fifty-two cases, in order to determine whether or not it depends upon the same germs as found in the case of the human being. He concluded that, whilst the microbes of human suppuration are met with in cattle, there are also a number of special forms not hitherto described, these being a streptococcus, a staphylococcus, and three bacilli. These forms may be found isolated, associated with one another, or associated with some of the forms seen in the human being. The following names have been given them: *Streptococcus pyogenes bovis*; *staphylococcus pyogenes bovis*; *bacillus pyogenes bovis*; *bacillus crassus pyogenes bovis*; *bacillus liquefaciens bovis*. The most common form is the streptococcus. It is smaller than that of man, and does not liquefy gelatines; the staphylococcus also is smaller than *staphylococcus pyogenes aureus*. The *bacillus pyogenes bovis* is smaller than that of tuberculosis, and grows poorly on

gelatines, and not at all on potato. It is inert in rabbits. The bacillus crassus grows readily on all media, does not liquefy gelatine, is non-virulent for rabbits, but killed guinea-pigs in thirty-six hours when intraperitoneally injected. The bacillus liquefaciens liquefies gelatine, and gives rise to abscesses in rabbits.—*Rev. Intern. de Bibliog. Med.*, July, 1893.

KETSCHER ON THE PATHOLOGICAL ANATOMY OF PARALYSIS AGITANS
AND OF THE NERVOUS SYSTEM IN SENILITY.

In three typical cases of paralysis agitans, the central and peripheral nervous system, and also the muscles, were carefully examined. Pathological changes were found in every case. Atrophy of all the tissue elements was present in varying degrees, and the ganglion cells in the brain were markedly pigmented, and had undergone disintegration. The nerve fibres in the cord were almost completely degenerated, this being especially marked in the posterior columns and also in the peripheral nerves. Muscular fibres partly atrophic and undergoing hyaline degeneration. Increase of connective tissue in the cord, peripheral nerves, and muscles. There is neuroglia sclerosis in the cord, affecting mostly the cortical layer and the blood vessels. This is more marked, however, in the posterior and lateral columns. There are also pronounced changes in the blood vessels, their walls being thickened and the adventitial sheath distended and infiltrated with round cells. Miliary aneurisms and hemorrhages are found scattered throughout the cord, particularly in the lumbar portion.

As a control experiment, he examined the nervous system of ten old people who had never suffered from paralysis agitans. The changes revealed differed only slightly from those found in paralysis agitans in which the same lesions were more pronounced. He agrees with those who claim that paralysis agitans is nothing more than expression of an abnormally high degree or form of premature senility of the nervous system. He is of the opinion that the primary changes occur in the vascular system, and that the nerve changes are secondary.—*The Epitome of Medicine*.

ACUTE PERFORATING ULCER OF THE STOMACH IN YOUNG ADULTS.

W. Soltan Fenwick, M.D., contributes a paper under the above heading to the *Journal of Pathology and Bacteriology* for June, 1893. He excludes from consideration gastric ulceration accompanying the acute specific fevers, pyemia, or burns. The ulcers are multiple as a rule. Dr. Fenwick treats of solitary, acute, perforating ulcer seen at the pyloric end of the stomach, and on or near to the lesser curvature. We are prone to

think of such cases as always chronic in character, the reason being, according to the writer, that by the time death occurs a chronic stage has generally been reached.

The acute perforating ulcer is always found in young people—16 to 25 years of age—usually females, and anemia is frequently concomitant. The ulcer is seldom larger than a sixpence, and shows no sign of thickening or induration, and microscopic examination will fail to detect inflammation. In cases in which perforation has occurred, the shape will be distinctly that of a funnel, with the apex outwards. After describing the condition of which he means to treat, as above, the writer passes in review the different theories of causation that have been advanced, and criticizes them, adducing the results of his own experimental work to prove that they are inadequate.

(1) Embolism. Whilst it has been shown experimentally that embolism of the gastric arterial branches gives rise to necrosis and ulceration, it has not been shown that in the human being such embolism actually takes place. Clinical experience proves the gastric artery to be uncommonly free from such an accident; and, moreover, that ulceration occurs most frequently in patients in whose bodies no seat of origin for embola can be found. It is also noteworthy that ulcers resulting from embolism artificially produced are most common in the area not usually affected in the idiopathic disease, viz., in the cardiac and middle zones, and that in cases where embolism and ulceration at the pylorus do result from experiment the cardia is always affected too. In conclusion, the writer notes that ulcers produced experimentally always differ in character from the idiopathic form in showing distinct traces of hemorrhage and inflammation.

(2) Arterial Thrombosis. Thrombosis gives rise to ulceration only in those who are subjects of arterial disease, *e.g.*, arterio-sclerosis, and can therefore be but rarely a cause in the young. Moreover, ulceration so produced is always chronic, often multiple and non-perforating. Records, too, fail to show a case in which perforating ulcer has been accompanied by arterial disease.

(3) Ulcerous Obstruction. This cannot be admitted as a cause in the production of the form of ulceration under consideration. On account of the anatomical peculiarities of the ulcers of the stomach (absence of valves, etc.), obstruction must be very widespread to give rise to any lesion. Probably nothing short of plugging the portal vein, and that rapidly, will do much damage, and in case such obstruction does occur the ulceration resulting is multiple and confined to the cardiac portion of the stomach.

(4) Punctiform Hemorrhage. Certain cerebral and spinal injuries, as well as the blood states induced by the acute specific fevers, may lead to

small hemorrhages into the mucous membrane of the stomach, which, giving rise to necrosis, ultimately determine ulceration. Experiment has been successful also, certain hemolytic substances being used by injection. Ulceration so brought about is always multiple, and affects the whole surface of the stomach, as one would naturally expect.

(5) Vascular Spasm. Klebs has upheld the view that anemia, consequent upon vascular spasm, gives the gastric juice the opportunity of eroding the stomach lining, and Talma has shown that when spasm of the pylorus is kept up for some hours by faradization of the left vagus ulceration of the mucosa may result. The explanation is that the blood vessels are compressed and obstructed by the tonically contracted muscle of the pylorus, and erosion then takes place. There is absolutely nothing, however, in clinical experience to support such a theory, and, whilst possibility is admitted, probability must be very small.

All these theories, then, fail, in the opinion of the writer, to account for the occurrence of the acute perforating solitary ulcer as seen in the stomach of young adults.

In proposing an explanation of his own, Dr. Fenwick first glances at some features of the microscopical anatomy of the stomach, and in so doing directs particular attention to the occurrence and distribution of lymphoid tissue of the mucosa. It is found in two forms, viz., as a thin layer, or as definitely limited nodules. In both instances it rests upon the muscular mucosa as a rule; sometimes masses project through into the submucous tissue. Each of the nodules has its nutrient artery, and a lymphatic vessel running from its outer surface; they resemble very closely the solitary follicles of the small intestine, and, in fact, are spoken of as solitary glands of the stomach.

The distribution of these solitary glands in the stomach is also noteworthy. At all periods of life they are most numerous towards the pylorus, and "from puberty onward undergo a gradual diminution, seeming to retreat from the cardia towards the pylorus and lesser curvature." The lymphoid nodule, which penetrates into the submucosa, occurs only towards the pylorus, as far as Dr. Fenwick can discover.

The writer then goes on to show why he thinks acute perforating ulcers are formed in connection with necrosis of these lymphoid nodules.

In the first place, it is to be noted that the gastric solitary follicles are known to undergo inflammatory changes and necrosis in connection with a variety of affections, more rarely, it is true, than their homologues of the intestine, but still frequently enough to permit of accurate study.

Dr. Fenwick claims to have proven it by experiment with guinea-pigs; he also recorded cases in the human being. This being admitted, we have three questions to answer to complete our proof, viz., (a) Are the

microscopic characters of the ulcer consistent with the theory of its lymphatic origin? (b) Can any similar phenomena be observed in neighboring solitary glands? (c) Can the disease be shown to be allied to some general disorder like anemia? In answer to the first question it is to be remembered that the lymph follicles are of so small a size that it would be possible to recognize lymphatic tissue only at an early stage—at a period, in fact, when we can expect to get but few samples for study. In respect to the second question, whilst the writer is not able of his own experience to give an affirmative reply, he calls attention to the fact that Gerhardt has recorded the tracing of all the stages between simple follicular enlargement and the perforating ulcer. Lastly, he admits his inability to answer the third question in the affirmative, but thinks that this really strengthens his position, since it has been abundantly proven that “when lymphatic ulceration occurs as the result of some general dyscrasia, such as tuberculosis, typhoid, diphtheria, etc., the ulceration is always multiple, and the stomach exhibits all stages of the disease. In the human subject the ulcer is usually solitary, however, and it is therefore obvious that the disease must originate from a local, not a general, cause, and cannot be dependent upon anemia or any other blood disorder.”

The local cause may be an abraded condition of the mucosa over a follicle, and while this no doubt occurs very frequently, no ulceration resulting, occasionally the co-existence of anemia or hyperacidity of gastric juice, for example, may prevent healing and aid destruction.

The writer explains the funnel shape of perforating ulcers in this way: The gastric juice, as it dissolves away necrosed tissue, stimulates by its action contraction of the muscle fibres, and thus gradually limits its sphere of action as it goes.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto;

AND

E. HERBERT ADAMS, M.D., D.D.S.

THE DEADLY POLICEMAN'S CLUB AND THE BRUTAL CLUBBER.

Why does modern civilization permit policemen to strike on the head with their deadly clubs? The club of the policeman is a relic of the barbarous ages, and the man who would use it violently, except in the plainest self-defence of imperilled life, is a barbarian brute, even though he may have been taught to pray to the Holy Virgin and have St. Patrick for his patron saint. There are Christian as well as heathen brutes.

Why should a policeman strike a fellow-man with such a deadly weapon on the head? A resisting prisoner is just as easily overcome by blows on the arms, and the victim's future is not thereby imperilled. The risk of insanity and death are not great from a broken arm.

The damage done by the club is not fully known to the public because its victims belong to the defenceless and friendless class, who go without sympathetic following to the public hospitals, asylums, and to the Potter's field, like poor big-headed Willie, or Hartnett, of St. Louis, now on trial in a distant city for murder done under the influence of insanity caused by a policeman's club on his head in St. Louis several years ago while drunk.

Many of the cases of insanity attributed to drunkenness in pauper asylums are the results of policemen's club violence on the head.

Is there no regulation prohibiting striking on the head? Is there no law on the subject? If not, there should be both without delay.

Aside from the humanitarian aspect of the subject, taxpayers do not wish to have brain diseases and lunatics to be cared for at public expense, made through the brutal use of the club.

But humanity demands that the use of the club be restricted. The club is brutal anyway. It makes both policeman and criminal brutal, and the man who would use it on an unoffending prisoner or upon an offending or offensive one, about the head, except in case of the direst necessity of defending his own life, is "A wretch whom it were base flattery to call a coward."

Science, especially psychological science, and humanity protest against the brutalism of past ages. Let the club be abolished and the clubber suppressed.—*The Alienist and Neurologist*.

A FLOATING CHOLERA HOSPITAL.

A floating cholera hospital has been placed on the Thames, within the city limits of London, England, for the reception of cholera patients this season, in case the disease appears there.—*Sanitarian*.

HYPNOTISM.

The committee on hypnotism of the British Medical Association reported recently, affirming the genuineness of the agency, and prescribing restrictions. Its use should be forbidden to all but physicians, and these should not exercise it upon women except in the presence of relatives. It is further declared useful in relieving pain and procuring sleep, but it is not certain whether it can be successfully employed as a cure for drunkenness.—*Ex*.

SOME YEARLY APPROPRIATIONS FOR SANITARY PURPOSES.

New York City	\$435,000
Massachusetts	111,300
Texas	61,000
Illinois	49,000
Mississippi	46,000
Minnesota	29,000
New York State	25,000
Florida (about)	23,000
New Jersey	21,000
Wisconsin	20,000
Michigan	16,000
Alabama	13,000
Maryland	13,000
California	12,800
Connecticut	10,000

—*Florida Health Notes.*

STATE INSTITUTION FOR EPILEPTICS.

The American Neurological Association took a step in the right direction when it adopted the following resolution: "It is the unanimous sense of the American Neurological Association that the proper care of the epileptic class, so long delayed, be urged upon the public, upon state authorities, and especially upon all interested in the care of the sick and defective poor, whereby they may be relieved from asylums and almshouses, and may receive the required care in such separate establishments as their deplorable situation demands."—*Medical Standard.*

EFFECTS OF TOBACCO ON PHYSICAL DEVELOPMENT AT YALE
AND AMHERST.

Statistics on this controverted subject are rare. The following remarks are by Dr. Jay W. Seaver, of Yale, a reliable authority. They are based upon observations made of a college class of 187 men during their first and final years.

The growth of the men in four of the principal anthropometrical items, of varied character, is as follows:—

	Weight.	Height.	Chest girth.	Lung capacity.
Non-users	*11.87 lbs.	.894 in.	1.74 in.	21.6 cu. in.
Irregular users	11.06 lbs.	.788 in.	1.43 in.	14.45 cu. in.
Habitual users	10.66 lbs.	.721 in.	1.276 in.	12.17 cu. in.

*Metric measurements, also given by Dr. Seaver, are omitted.

If this growth be expressed in the form of percentage, it will be seen that in weight the non-users increased 10.4 per cent. more than the regular users, and 6.6 per cent. more than the occasional user. In the growth of height the non-user increased 24 per cent. more than the regular user, and 14 per cent. more than the occasional user. In the growth of chest girth, the non-user has an advantage over the regular user of 26.7 per cent., and over the occasional user of 22 per cent., but in capacity of lungs the growth is in favor of the non-user by 77.5 per cent. when compared with the regular users, and 49.5 per cent. when compared with the irregular users.

It has long been recognized by the ablest medical authorities that the use of tobacco is injurious to the respiratory tract, but the extent of its influence in checking growth in this and in other directions has, I believe, been widely underestimated.

Dr. Seaver's conclusions in regard to the dwarfing effect of tobacco are fully corroborated by the following statement by Prof. Hitchcock, M.D. of Amherst College, more recently published :

"The matter of tobacco smoking as an influence upon the physical development of Amherst students has been studied in the history of the class of '91. Of this class 75 per cent. have increased in their measurements and tests during the whole course, while 29 per cent. have remained stationary or fallen off.

"In separating the smokers from the non-smokers, it appears that in the item of weight the non-smokers have increased 24 per cent. more than the smokers ; in height they have surpassed them 37 per cent.; and in the chest girth 42 per cent. And in the lung capacity there is a difference of 8.36 cubic inches (this is about 75 per cent.) in favor of the non-smokers, which is 3 per cent. of the total lung capacity of the class."

THE CLERGY AS HYGIENISTS.

A number of the clergy of Philadelphia have appeared before the mayor of that city to urge him to take active measures towards keeping that city cleaner, and also to put in force any laws which may be used to prevent the cholera there this year. The clergy can wield a very great influence, not only on the personal cleanliness of the individual, but also as to his habits regarding his general sanitary surroundings, and it is pleasing to see that our ministerial friends of Philadelphia are showing in a practical manner their regard for the material as well as the spiritual welfare of their flock.

TUBERCULIN IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

At the last annual meeting of the American Climatological Association, held at Philadelphia, May 25th, 26th, and 27th, 1893, two papers were

read on the above subject. Dr. Karl von Kuck, of Asheville, N.C., read a paper entitled: "A Contribution to the Results of Treatment of Pulmonary Tuberculosis by Professor Koch's Method." He detailed the further process of twenty-five cases of pulmonary tuberculosis treated with tuberculin, and reported two years previously. In the five cases treated in the early stage, recovery has taken place and no relapse has occurred. Of seven more advanced cases, final recovery took place in six; relapse in one, followed, however, by improvement. Of thirteen far-advanced cases, death took place in seven; six are still alive, three continuing greatly improved, and three others remain improved.

Dr. I. H. Hance, of Saranac Lake, N.Y., read a paper entitled "A Clinical Study of Crude Tuberculin and Modifications of the Lymph in the Adirondack Cottage Sanitarium." He reported twelve cases treated with Trudeau's modification of tuberculin. In all, the sputum contained tubercle bacilli. In four of the cases, the process was incipient; in five, advanced; and in three, far advanced. Three of the incipient cases were cured, and no relapse has occurred now after eighteen months. One has returned to the sanitarium, but the process is confined to one lung, and has assumed a more limited character than usual. Of the advanced cases, one is well (discharged eight months ago), as are three others discharged at later periods; the fifth has been lost sight of. Of the far-advanced cases, two were hopeless and are dead, and the third left the sanitarium with the disease quiescent, but was suffering from gastric catarrh. Since, she has developed diarrhea, and is probably dead. In all these far-advanced cases, throat lesions were most pronounced.

Editorials.

THE MEDICAL SCHOOLS.

ACCORDING to the various announcements, the medical schools of Canada will open October 2nd and 3rd. It is expected that the number of students commencing the study of medicine in Ontario may be somewhat less than last year, because the new regulations of the Medical Council, which require a five years' course, come now into force for the first time. A great many recognize the fact that our profession now contains too many members, and that, consequently, a smaller number of medical students will be a blessing rather than an evil. We are told,

however, that according to present indications the Toronto medical schools are likely to have large classes. Certain exaggerated reports with reference to financial matters in connection with the medical faculty of the University of Toronto have caused some of its friends to fear that it cannot last much longer; but it is confidently asserted by those who ought to know that the prospects for the future success of the faculty were never brighter than at present. Without discussing details at this time, we may say that we have reason to believe the University is bound to support its medical faculty, and encourage its development in the direction of continuous advance, instead of allowing its usefulness to be impaired in any way. The opening lecture for the coming session will be delivered by Professor A. B. Macallum, in the Biological Department, at eight o'clock in the evening of October 3rd.

The opening exercises in Trinity Medical College will take place October 2nd, when Dr. D. Gilbert Gordon will deliver the opening lecture at four o'clock in the afternoon, in the lecture room of the college.

The opening lecture of the Woman's Medical College will be delivered on the same day by Dr. G. B. Smith. The friends of the latter institution are well pleased with its progress, and expect a large attendance during the coming session. The medical schools of London and Kingston will be opened on the same day.

PAN-AMERICAN MEDICAL CONGRESS.

THE first Pan-American Medical Congress, held in Washington, September 5th, 6th, 7th, and 8th, is reported to have been highly successful. President Cleveland formally opened the proceedings, and delivered a short and appropriate address. An address of welcome was also delivered by the president of the District of Columbia. After the presentation of an informal report by the secretary-general, Dr. William Pepper, of Philadelphia, delivered an admirable address, which is published in full in the *New York Medical Journal*, September 9th.

We are informed that the work done in the various sections was of a high order. We hope to be able to refer in detail to the meeting in our next issue. Various American journals give great praise to the secretary-general, Dr. Charles A. L. Reed, of Cincinnati, who conceived the idea of holding the congress, and has been its principal promoter during the last two years. It is doubtful if the world has ever seen a better organization in connection with any meeting of medical men. Dr. Reed has certainly shown wondrous energy and great executive ability, and well deserves the praise which has been showered upon him from various quarters. We

have much pleasure in offering our congratulations to the worthy doctor who happens to be as genial as he is able, and his active co-workers, on the pronounced success which has crowned their labors.

We regret that there was not as large a representation from Canada as had been expected. Dr. J. E. Graham, the vice-president for British North America, was prevented from attending in consequence of engagements in Europe; and Dr. James F. W. Ross, of Toronto, a member of the executive committee for British North America, was unable to leave home on account of illness in his family. Many others who had made arrangements to go were prevented by accidental circumstances. The World's Fair at Chicago was a great counter-attraction, and many who spent a week or more in the great White City were not able to take a second trip to Washington. Doctors, like other people, are affected by the depression in money matters, and many were unable to afford the rather expensive trip to Washington. Among those who attended from Toronto were Drs. Bryce, Macallum, and Price-Brown.

PELVIC PERITONITIS.

WE publish in this issue an abstract of Dr. Collingworth's address in the Section of Obstetrics and Gynecology, at the late meeting of the British Medical Association, on the subject of pelvic peritonitis in the female, and the pathology of the Fallopian tubes in connection therewith; not because it contains anything absolutely new, but because it gives a concise, clear, and temperate exposition of the subject according to our present lights. His sketch of the history of the subject is especially interesting, and very properly gives due credit to Bernutz, who first recognized the true nature of swellings in the pelvis, which had for so long been considered as the effects of cellulitis. But, as the *British Medical Journal* says, editorially, his work had little practical effect beyond that of correcting errors in morbid anatomy.

It was supposed by most of those who paid any attention to the writings of Bernutz on the subject that such conditions as were described by him might be seen in the *post-mortem* room, but could not be recognized during the life of the patient. The practical work of Battey, Hegar, and Tait changed all of them. Tait, especially, taught us that pus tubes should be removed. Surgeons in all parts of the world are now removing seriously diseased Fallopian tubes, and it is difficult to realize that, a few years ago, the conditions referred were neither recognized nor properly treated. A large number of women suffering from pelvic inflammation were simply allowed to die, or sink into hopeless, chronic invalidism.

We need not tell our readers that "Tait's" operation has been subjected to much hostile and intemperate criticism. It is certainly a fact that injudicious operators have been too fond of removing ovaries and tubes. Dr. Cullingworth's references to his critics are brief, but contain a touch of humor that makes them very readable. The six cases described by the author so clearly illustrate the various views which he has expressed in his address that we have thought it well to give them almost in full.

Dr. Cullingworth's views respecting the dorsal position as the best for the purpose of a thorough examination of a patient will be read with interest by all who know the pronounced views of a large proportion of British obstetricians on the subject. One of the strongest arguments used by the majority in Great Britain, who prefer the lateral position, is that the dorsal position offends the modesty of the patients. The author appears to have broken away from certain British traditions, and gives a positive opinion in favor of the dorsal position, especially when patients are being examined for inflammatory troubles in the pelvis.

We certainly entertain the highest respect for the scruples of our female patients, but we agree with Dr. Cullingworth in thinking that it is no difficult matter to place them in that position in which we can find out most about their ailments without offending their sensibilities in the least degree.

MEDICAL COUNCIL ELECTIONS.

THERE seems to be some doubt as to when the next election of the College of Physicians and Surgeons of Ontario should take place. Certain members of the Defence Association, and a portion of the lay press, are of the opinion that the general understanding of the committee considering council matters at the last session of Parliament was that there should be only one session of the council held after the passage of the amended Act before the next election, which should take place at the ordinary time, that is, the month of March in 1894. Certain members of the council say that there was no such understanding, and that they are to be guided simply by the wording of the Act, which calls for the election in the year 1894, without specifying any particular time in that year.

We do not consider it a very serious matter whether the election of 1894 is held in March or September, but we certainly hope that the amended Act will be carried out in its spirit, as well as in its letter. We are in some doubt as to what the understanding of the committee clearly was, but we know that a certain number of gentlemen, who are not inimical to the council, agreed with those Defence men who assert that the

new election was to be held early in 1894, before the meeting of the council in that year. It certainly will not do for the council to do anything which savors of sharp practice. We believe that the majority of its members have no desire to do anything of the kind. It ought not to be difficult for the officers of the council to ascertain from prominent members of the legislative committee, including the Attorney-General, whether there was any definite understanding on this subject or not. If there was, it certainly should be carried out. If there was no definite understanding on the subject, we have simply to take the wording of the Act before referred to, and allow the council the right to choose the time for the election in the year 1894.

The president of the council, Dr. Campbell, possesses integrity, ability, and good judgment. He has an intimate knowledge of the various negotiations respecting amendments to the Medical Act. He was present at certain meetings of the legislative committee, especially the last and most important one. He ought to be in a position to know, or at all events learn, what the intentions of the committee were. We believe that he will do, as far as he can, what is right in the matter.

If, however, the council at its last meeting definitely decided to hold another session in June of 1894 before the election, he and his brother officers may have no option. Until we get further definite information about certain doubtful points, we shall be unable to give a definite opinion; but we may say to the council that many of its friends, and all of its foes, would like to get some further light.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

We have frequently spoken about the growth and influence of the British Medical Association, which have been the wonder and admiration of the medical world. The sixty-first annual meeting was held in Newcastle-on-Tyne, August 1st to 4th, inclusive, and was, in all respects, a pronounced success. The association is more thoroughly democratic and representative in its constitution and government than any other medical association in any empire, kingdom, or republic in the world. Our attempts to imitate it in the United States and Canada have, so far, fallen short of success as almost to have become dismal failures. The British Association represents no cliques, nor parties; but contains within its ranks all sorts and conditions of medical practitioners. It is magnificent in its proportions, and a wondrous power for good in Great Britain and her colonies.

A fair idea of its growth may be obtained by a consideration of the figures found in the opening address of the president, Dr. Philipson. He called attention to the fact that a former meeting of the association was held in Newcastle in 1870. At that time the association numbered four thousand two hundred and fifty-eight; now it has on its roll fourteen thousand seven hundred members. As he had stated, the proportion of British members of the profession who are not yet members of the association is a steadily diminishing minority. There were at that time six sections; at the meeting of this year there were eleven. These figures, however, can give no adequate idea of the wonderful advancement in various ways in all the different sections. One of the most interesting features of the Newcastle meeting was the annual museum, which was larger and more interesting than the association has ever seen before. It was divided into six sections, as follows: Food and Drugs, Instruments and Books, Sanitary and Ambulance Appliances, Pathology, Anatomy and Physiology, Otology. Some of these sections were again subdivided; for instance, the section devoted to Pathology was subdivided into three parts: Diseases of the Skin, Diseases of the Eye, General Pathology. The section of Pathology has been unusually interesting at the last two meetings. We referred last year to the admirable work of Mr. Victor Horsley, and are glad to know that he still devotes his untiring energies towards the advance of pathological science. A grand opportunity was again afforded to practising physicians and surgeons to learn much of what is new in pathology. The demonstrating lecture lantern was used, and photographic reproductions of specimens were presented. The social greetings and actions of the residents towards the visitors were more than generous, and the grand old University of Durham showed her interest in the association by conferring honors upon certain of its most distinguished members.

One of the most important bodies in connection with the association is the council which does the executive work. Dr. Withers Moore has just finished his term of three years as president of the council, and Dr. Ward Cousins, of Portsmouth, has been elected as his successor. The council, in its report at Newcastle, recommended Bristol as the next place of meeting, and Dr. Long Fox as the president. The report was adopted, and Dr. Fox, in returning thanks for his election, promised a warm and cordial greeting of the resident practitioners of Bristol and neighborhood to the members of the association at the next year's meeting.

Book Reviews.

HYDROPATHY AT SARATOGA. By J. A. Irwin, M.A. Camb., M.D., M.R.C.S. Eng., etc. 270 pages, muslin. The Carsell Publishing Company, New York.

ELEMENTARY PHYSIOLOGY FOR STUDENTS. By Alfred T. Schofield, M.D., M.R.C.S. Eng., etc. 372 pages; muslin. Lea Brothers & Co., Philadelphia.

DISEASES OF THE LUNGS. By R. Douglas Powell, M.D. Lond., F.R.C.P., etc. Fourth edition. Illustrated; 8vo., muslin, 600 pages; price, 18s. H. K. Lewis, 136 Gower Street, London, W.C.

NURSING. Its Principles and Practice for Hospital and Private Use. By Isabel Adams Hampton, Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital. 480 pages, muslin. Price, \$2. W. B. Saunders, Philadelphia.

LESSONS IN PHYSICAL DIAGNOSIS. By Alfred L. Loomis, M.D., LL.D., Professor of the Practice of Medicine and Pathology in the University of the City of New York. Tenth edition, revised and enlarged. Octavo. Illustrations, some in color. 240 pages, extra muslin; price, \$3. New York: William Wood & Company.

A CHAPTER ON CHOLERA FOR LAY READERS: HISTORY, SYMPTOMS, PREVENTION, AND TREATMENT OF THE DISEASE. By Walter Vought, Ph.B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with colored plates and wood engravings. In one small 12mo. volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This little work gives a very careful review of past epidemics, deals with the matter of infection from a scientific and common-sense point of view, and endeavors to allay unnecessary fears in the public mind, and point them to the many available means of prevention of this dread disease.

DUNGLISON'S NEW PRONOUNCING MEDICAL DICTIONARY.

A new edition of Dunglison's medical dictionary is announced as in press for early publication. It has been thoroughly revised and greatly enlarged, and will contain about forty-four thousand new medical words and phrases. Pronunciation has been introduced into the new edition by means of a simple phonetic spelling. This work has always been noted for the fullness of its

definitions, ample explanation being its distinguishing characteristic. In the new edition much encyclopedic information, difficult of access elsewhere, will be found conveniently at hand. Especial attention has been devoted to matters of practical value. A review will appear in an early issue.

REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF MICHIGAN FOR 1890 (Printed 1892).

We presume that the struggle, if not for existence, at least for habitation, has had something to do with the tardy appearance of this volume. This condition of affairs is not creditable to a state which was one of the earliest to take its position in the front rank of sanitary reform; and we hope the intelligence of the state will prevail in bringing the obstructionists up with a jerk. We observe that the educating influence of sanitary conventions is, or was in 1889-90, very fully recognized by the State Board, and that very extensive meteorological observations and diagrammatic compilations are still made. In addition, the report gives an account of large amounts of the usual sanitary work of such boards, classified lists of nuisances and action taken in regard to them, accidents, outbreaks of disease, water supply, sewage disposal, advisory action regarding buildings, etc.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By John V. Shoemaker, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin, in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc., etc. Second Edition. Revised. In two Royal Octavo Volumes. Volume I., 353 pages: Devoted to Pharmacy, General Pharmacology, and Therapeutics and Remedial Agents not Properly Classed with Drugs. Volume II., 680 pages: An Independent Volume upon Drugs. Volume I., in Cloth, \$2.50 net; Sheep, \$3.25 net. Volume II., in Cloth, \$3.50 net; Sheep, \$4.50 net. Philadelphia: The F. A. Davis Company, Publishers, 1914 and 1916 Cherry Street.

This is, in all respects, an admirable work. Volume I. is devoted to pharmacy, pharmacology, and therapeutics and remedial agents, such as electricity, massage, medicated vapors, water, diet, hypnotism, blood letting, etc.

Volume II. treats of drugs as pharmaceutical therapeutic agents. The author says: "It was my aim to render this volume a complete as well as a practical exposition of the pharmacological, physiological, and therapeutical action of the various drugs now used in medicine." He contends, and most will agree with him, that practical usefulness determines the standard of value of a treatise on therapeutics. We think that he has well accomplished his aim, and has shown excellent judgment in considering and teaching the practical aspects of the curative power of drugs. We believe this work will be

appreciated by general practitioners as one of the best of its kind which has been published. The ordinary practising physician longs for plain, common-sense teaching in therapeutics. We think that we can promise him that he will find it in these two volumes.

NEW EDITION OF GRAY'S ANATOMY.—The thirteenth edition of this standard work is announced for early publication by Messrs. Lea Bros. & Co., Philadelphia. Without expressing any opinion as to the merits or demerits of this book, we certainly have to recognize the fact that it has been, and is now, exceedingly popular. The publishers tell us that it will appear in a form much improved and enlarged. An early review will appear in *THE PRACTITIONER*.

The following pamphlets and reprints have been received :

ON THE CONDUCT OF THE REST TREATMENT. By J. Madison Taylor, M.D. Reprinted from the *Therapeutic Gazette*.

APPARENT AND ACTUAL MORTALITY. By F. D. Bullard, A.M., M.D., Los Angeles, Cal. Reprinted from *Southern California Practitioner*.

DEFORMITIES OF THE NASAL SEPTUM, and their influence on diseases of the ear and throat. By William Scheppegegrell, A.M., M.D. Reprinted from *New Orleans Medical and Surgical Journal*.

THE SURGERY OF GALLSTONE OBSTRUCTION. A NEW AND SAFE METHOD OF CUTTING ESOPHAGEAL STRICTURES. By Robert Abbe, M.D., New York. Both reprinted from the *Medical Record*.

CLINICAL NOTES ON CHANCER OF THE TONSIL, with analysis of fifteen cases. By L. Duncan Bulkley, A.M., M.D., New York. Reprinted from *Transactions of the Medical Society of the State of New York*.

SOME OBSERVATIONS RESPECTING THE PATHOLOGY AND PATHOLOGICAL ANATOMY OF NODULAR CYSTITIS. By Samuel Alexander, A.M., M.D., New York. Reprinted from the *Journal of Cutaneous and Genito-Urinary Diseases*.

Medical Items.

DR. MACFARLANE, of Toronto, returned from his trip to British Columbia and California, September 6th.

DR. L. L. PALMER has been made a life member of the Ophthalmology Society of the United Kingdom of Great Britain.

M. CHARCOT died at Morvan, August 16th. He was born in Paris in 1825, and was therefore sixty-eight years of age.

DR. J. W. CROSS (Tor. '80), who has been practising for some years in Victoria, Australia, has recently visited his friends in Canada. He spent a few days in Toronto in the latter part of August.

DR. A. MCPHEDRAN, of Toronto, was confined to his bed for two weeks, during the month of August, with a severe attack of bronchitis. He is now quite well.

DR. McDONOUGH, who has been away for nearly three months, is now on his way home from Japan. He expects to be able to resume practice on September 19th.

DR. J. E. GRAHAM, after an absence of four months in Great Britain and the continent, has returned to Toronto. He commenced regular practice on September 12th.

SMOKING compartments for ladies are now provided on all Russian railway trains.

PROFESSOR VON ESMARCH has done 20,000 important operations. He is now seventy years of age, and if he lives ten years more he will stop working and write his memoirs.

WE clip the following from the *New England Medical Monthly*. The regular price is high, but at the reduction is cheap :

"We will mail *The Prescription* and *New England Medical Monthly* for one year for \$2.50. The regular price is \$300."

IN August Prof. Adam Politzer, the distinguished aural surgeon, of Vienna, Austria, visited Dr. L. L. Palmer, of Toronto. A very interesting entertainment was given to a number of medical men of the city who were invited by Dr. Palmer to meet the distinguished stranger. During the evening Prof. Politzer gave a demonstration on the ear, and exhibited preparations showing the conditions existing in certain forms of deafness, and how to recognize them.

A FRENCHS urgeon wanted the autopsy, although he had cured the patient. Professor Gayet, of Lyons, was the surgeon. Having cured a man of an arterio-venous aneurism of the internal carotid artery and the cavernous sinus, and being desirous that this happy result should be verified after the death of the patient, he paid his patient a certain sum for having tattooed on his arm the following lugubrious words : "Anévrisme artério-veineux du sinus caveux guéri ; prière d'autopsier."

ANTE-MORTEM WILL.—A story is reported from St. Louis of a man named O'Reilly dying of phthisis in a crowded hospital, who told a benevolent lady who visited the hospital with her daughter that he had made a will leaving the daughter \$3,000. By the influence of this lady he was removed to a comfortable infirmary. Having found his little trick so successful, he tried it again upon the sisters, saying that he had amended his will, and left half his property to the institution. He was well cared for and properly buried, and it was not until some time after his death, when a dispute arose between the charitable lady and the infirmary, that it was discovered that he had absolutely nothing in the world.—*Medical Press*.

THE one hundred and twenty-eighth annual session of the Medical Department of the University of Pennsylvania will open on Monday, Oct. 2nd. The introductory address will be delivered by the Provost, Dr. Pepper. The matriculating class of this year will enter upon a graded course extending over four years.

DEATH OF DR. VIDAL.—We regret to announce the death of Doctor Emile Vidal, the distinguished dermatologist of Paris, which occurred on the 16th of June, 1893. Doctor Vidal was for many years connected with the Hospital St. Louis, and was at the time of his death one of the editors of the *Annales de Dermatologie et de Syphiligraphie*.

He has enriched dermatology by numerous important contributions, and was an active worker in our specialty up to the time of his death.—*Journal of Cutaneous Diseases*.

DR. FRANK J. THORNBURY, of Buffalo, reports a death from nitrous oxide gas. Four gallons of the gas were administered by a dentist for the extraction of four teeth. The patient soon began to show signs of embarrassed breathing, and the pulse became rapid. Artificial respiration was resorted to; lower extremities elevated; nitro-glycerine administered hypodermically, and ammonia applied to the nostrils. Patient seemed to rally for a short time, but unconsciousness continued, pulse became more rapid and feeble, and the heart's action finally ceased.

DIGITAL COMPRESSION IN THE VOMITING OF ANESTHESIA.—Dr. Bernard Joos describes a method for the control of the hiccough and vomiting during anesthesia which he has found successful for several years. It consists in digital compression of the phrenic and vagus nerve against the sternal end of the clavicle. His method is as follows: As soon as singultus or vomiting begins, the etherizer presses the last phalanx of the left thumb firmly over the sternal end of the clavicle, the body of the thumb being parallel with the clavicle and the hand resting on the chest. The pressure is made with the radial side of the thumb. The vomiting stops at once, as a rule. If needed, or more convenient, the pressure may be made on the right side. Pressure is continued for a few moments to prevent a return of the vomiting. He recommends the trial of this method in cases of seasickness.—*Boston Medical and Surgical Journal*.

THE proportion of the defective and sickly among school children has been shown in a striking way by a committee of the London Charity Organization Society. After two years of labor they publish the results of an investigation into the physical condition of 50,000 school children, all being children of the poor. It was found that of the 50,027 children, no fewer than 9,186, or 18.3 per cent., were defective in some way or other. Examining these 9,186 still further, we find that 5,851 showed defects of development; 5,487 presented abnormal nerve signs; 2,003 were delicate, pale, and thin; 3,679 were reported by the teachers as being dull in school; 1,473 showed eye defects; 67 were deaf; 239 were crippled, paralyzed, maimed, or deformed;

54 were epileptic; 234 were feeble-minded; and 817 required special care and training. It is estimated that about 13 per 1,000 need special care and training.

MR. ERNEST HART, of the *British Medical Journal*, has been in Chicago, and enterprising reporters connected with the daily papers have taken some little interest in him. One represents him as a sort of prize-fighter, who went to a meeting of the congress on Psychical Science, raised a disturbance, and gave the secretary a black eye. It is well known that Mr. Hart is not in sympathy with spiritualistic cranks, and has expressed his opinions about their actions in vigorous English. We understand he attended the meeting referred to with the intention of reading a certain letter which touched on the subject of spiritualism. He did not receive a very friendly greeting, but there was no fist-cuffing, and no man's eye suffered in the least from any exertions on the part of the "worthy doctor's right fist." On a previous occasion Mr. Hart was "interviewed," and gave a decided opinion that the Chicago water was not good. Next day a report appears with flaming head lines: "Dr. Hart, the distinguished English physician, pronounces the Chicago water excellent." Mr. Hart thought that the reporter who converted decidedly bad into superlatively good was approaching the realms of fiction.

THE ESTEEM OF ONE'S FELLOWS.—In the course of the Croonian Lecture, delivered recently by Virchow, he says: "Who of us is not in need of friendly encouragement in the changing events of life? True happiness is not based on the appreciation of others, but on the consciousness of one's own honest labor. How otherwise should we hold our ground in the midst of the turmoil of the day? How should we preserve the hope of progress and of final victory against the attacks of opponents and the insults which are spared to no one who comes before the public? He who during a long and busy life is exposed to public opinion certainly learns to bear unjust criticism with equanimity; but this comes only through the confidence that our cause is the best, and that some day it must triumph. Such is our hope in our wrestlings for progress in science and art; such is our hope in our struggles for civil and religious liberty, and in this hope we gradually become hardened against malicious attacks. It is a kind of immunization which, I acknowledge, has also great drawbacks, for this hardening toward unjust attacks leads very easily to a similar indifference toward just attacks, and, owing to the tendency to contradiction rooted in the nature of human thought, it finally leads also to indifference to praise and recognition. One withdraws again and again into one's self, discontented with the world and with one's self also; but who can so completely retire within himself that the consciousness of the insufficiency of human thought, and that the criticisms of opponents are justified, cannot break through the crust of even the most hardened self-consciousness? Happy is he who has courage enough to keep up or regain his connections with other men, and to take part in the common work. Thrice happy he who does not lack in this work the flattering commendation of esteemed colleagues."

TESTS OF DEATH.—Dr. Edwin Howard describes a case in the *Lancet*, June 10th, in which the question whether death had occurred was entered into at length, because of the lifelike appearance of the body, and a history of a previous deathlike trance. With Sir Benjamin Ward Richardson the following ten tests were undertaken, two of which argued for, the other eight against, the presence of life. The paper is intended to show that the “diaphanous test” (No. 10) is unreliable, as in this case the fact of death was subsequently proved by waiting for decomposition. The list of tests is instructive, and may at any time be useful to a medical man.

(1) Heart sounds and motion entirely absent, together with all pulse movement. (2) Respiratory sounds and movements entirely absent. (3) Temperature of the body taken from the mouth the same as that of the surrounding air in the room, 62° F. (4) A bright needle plunged into the body of the biceps muscle (Cloquet's needle test), and left there shows on withdrawal no sign of oxidation. (5) Intermittent shocks of electricity at different tensions passed by needles into various muscles and groups of muscle give no indication whatever of irritability. (6) The fillet test applied to the veins of the arm (Richardson's test) causes no filling of veins on the distal side of the fillet. (7) The opening of a vein to ascertain whether the blood has undergone coagulation shows that the blood was still fluid. (8) The subcutaneous injection of ammonia (Monte Verdi's test) causes the dirty brown stain indicative of dissolution. (9) On making careful movements of the joints of the extremities, of the lower jaw and of the occipito-frontalis, rigor mortis is found in several parts.

Thus of these nine tests eight distinctly declared that death was absolute ; the exception, the fluidity of the blood, being a phenomenon quite compatible with blood preternaturally fluid and at a low temperature, even though death had occurred.

There now remained the diaphanous test (10), which was carried out by the aid of a powerful reflector lamp ; the scarlet line of life between the fingers was as distinct as it was in living hands subjected to the same experiment.—*Medical and Surgical Reporter*.

DEATH OF AN OBSTETRICIAN FROM ACUTE SEPTICEMIA.—Full details have been published of the lamented death, recently announced in the *British Medical Journal*, of Dr. Emile Blanc, of Paris, from septicemia of extreme severity. He was only 35. According to Dr. M. A. Poncet, whose clinical report of the case appears in the current number of the *Archives de Tocologie*, Dr. Blanc removed some pieces of retained placenta, at 8 a.m., on May 23rd, from a patient who had already shown signs of puerperal infection. There was a very small agnail on the left forefinger where the skin is reflected on the side of the nail. Shortly afterwards the place became tender. Forty-eight hours afterwards, all tenderness had passed away from the seat of infection. Yet only six hours after infection Dr. Blanc was seized with intense pain in the left axilla. There was no evidence of inflamed lymphatics in the left arm. Two hours later a slight rigor occurred, with cutis anserina, followed by nausea and vomiting, which lasted for two days. The unfortunate obstetrician felt

certain that he had received a deathblow, and took to his bed, never to rise again. On May 24th the temperature rose to over 105° F., the pulse to 130. There was swelling in the left axilla, extending to the subclavicular region; the skin was not red. But the most intense lancinating pains were felt in that part, especially when the arm was moved. It was agreed that the focus of infection in the axilla ought to be excised so as to give the patient a fair chance. Dr. Poncet dissected out some edematous axillary glands, and also opened the subclavian region and cut out some glands there. The edematous connective tissue in those parts was of a saffron color; not a drop of pus could be found. Both wounds were freely touched with the actual cautery. There was complete temporary relief; the pains ceased entirely, but within twenty-four hours they returned and the swelling also reappeared. The raw surfaces of the wounds, which were dressed with antiseptics and had not been sutured, were of a coppery yellow color, and around them was slight swelling of undefined limits. Extreme dyspnea set in, relieved by subcutaneous injections of morphine and inhalations of chloroform. Dr. Blanc died at seven in the morning of May 28th. Though so young, he had done excellent work. Amongst his contributions to medical literature are papers on Forehead Presentations, on the Inferior Segment of the Uterus at the End of Pregnancy, on the Toxic Nature of the Urine in Pregnant Women, and on the Pathogenic Action of a Microbe found in the Urine of Eclamptics.—*British Medical Journal*.

THE WILLIAM F. JENKS MEMORIAL PRIZE.—The third triennial prize, of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "Infant Mortality during Labor, and its Prevention." The conditions annexed by the founder of this prize are that the "prize or award must always be for some subject connected with obstetrics, or the diseases of women, or the diseases of children"; and that "the trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or, if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U.S.A., before January 1, 1895, addressed to Horace Y. Evans, M.D., chairman of the William F. Jenks prize committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers or their agents within one year.

The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

Address, James V. Ingham, secretary of the trustees, College of Physicians of Philadelphia, northeast corner of 13th and Locust streets.

August 1st, 1893.

THE DISCOMFORTS OF AN ALBINO.—An autobiographic chapter of the recently published life of Lord Sherbrooke (*British Medical Journal*) gives an interesting, although not altogether accurate, account of his sufferings as an albino, a misfortune which he shared with an older sister. His description is as follows: "The peculiarity of my eyes consists in the total absence of coloring matter; this occasions, of course, especially in a man, a very marked peculiarity of complexion, amounting in early youth to something of effeminacy. For this evil, however, I have found age a sovereign cure; but as the absence of coloring matter extends to the eye, it necessarily occasions a great impatience of light. The eyelids must always be nearly closed, and so I have never been able to enjoy the luxury of staring any one full in the face. Of course this intolerance of light must be attended with something very closely approaching to pain. I cannot even conceive the state of a person to whom sight is a function free from all pain and distress; but as I have no standard to measure by, I may exaggerate my own misfortune. The cause of this annoyance is the total absence of what is called the pigmentum nigrum, the dark rim which surrounds the pupil of the eye and absorbs the rays of light which are not needed for the act of vision, and only confuse and disturb it. But, in addition to this defect, I had to contend with a malformation of the eye; one eye has never been available to me for reading, and the other was hypermetropic—that is, the refracting power was so slight that the focus must be very near the back of my head. I began life, in fact, very much in the state of persons who have been couched for cataract, with the additional disqualifications that I had only one eye to rely upon, and that had no pigmentum nigrum to protect it." This account is of interest as that of an educated observer without medical knowledge. The degree of "impatience of light," as Lord Sherbrooke rather aptly puts it, varies considerably in albinos, and some are able to pursue ordinary avocations with comparatively little discomfort. The absence of pigment referred to by Lord Sherbrooke is not, of course, confined to the "dark rim surrounding the pupil," but extends to the whole of the uveal tract, iris, ciliary body, and choroid, and this absence renders the iris more or less diaphanous.

AT the final exercises of the Marion Sims Medical College in St. Louis words of love seem to have been the order of the day, and on what more appropriate subject than "Children" could words of love be spoken? We congratulate Dr. Love on his address, sparkling, as it does, with humor, sprinkled

here and there with pathos, and filled with much common sense, that men of the world should cherish. At one place he says that "the man who cannot take a joke is unfortunate." At another: "Remember that the best medical college on earth is nothing more than a kindergarten. Continue to be students during all the years of your lives." "Guard the health of your bodies; a half-sick doctor is no doctor at all. The only thing for a doctor to do, if broken down, is to quit the profession, or die." "Do not cultivate local fraternal societies. There are doctors who know more of Masonic matters than medicine, and the public may safely avoid them. A political doctor runs the risk soon of being known more as a bummer or a boddler than as a scientist or a friend of humanity, and is a sight sufficient to make the spirits of Hunter, Harvey, McDowel, Hodgen, and Cross become jangled and out of tune. Join yourselves to no party that does not carry the flag and keep step to the music of the sciences." "You cannot hope to be a social success and a good doctor. The only time that a doctor can cut a swell is when he lances a boil. I advise you to avoid society, for within its domains nimble heels are of more value than brains." "Have your little recreations and hobbies, but let them be merely incidental, and only with a view to your best good." "Develop cheerfulness; develop the disposition to overlook the weaknesses and frailties of man. Never have any grievances." "Do not believe everything that a patient may say in derogation of another doctor; above all, give no ear to statements said to have been made by other physicians reflecting on yourselves. Ninety-nine times out of one hundred they have been misunderstood, and modified in the repeating. Believe nothing disagreeable and unkind that you hear of any one, and very little that you see or know to be true." Then comes a little word of love for the doctor's wife; he tells what a doctor's wife ought to be. "The well-married doctor, other things being equal, is the better doctor. As the doctor's patients always have to show their tongues, the doctor's wife must never show hers." He says that the doctor's wife "must be so thoroughly unselfish that she cannot be jealous." But, in another paragraph: "It will be difficult for one who saw the beautiful, angelic Adelaide Neilson to ever forget her beauty; but any one who was fortunate enough to have heard the gentle, soothing notes of her lutelike voice will never forget them. I think that the faithful one in dying, as he approaches the gates of heaven, may expect to hear notes reminding him of the tones of that voice." Then, further, he says that "the wife will soon learn that her husband belongs more to other people than to her." We have enjoyed reading the paper, notwithstanding its many little peculiarities already pointed out, and we are sure it was enjoyed by the audience who heard it read. We congratulate our friend, Dr. Love, and hope that the "children's rights" are not reserved. We found them in the *Buffalo Medical and Surgical Journal*.

CANADIAN MEDICAL ASSOCIATION.

The following is the programme of the twenty-sixth annual meeting of the Canadian Medical Association, which will be held at London, Ont., on Wednesday and Thursday, 20th and 21st September, 1893 :

WEDNESDAY, 20TH SEPTEMBER.

General meeting opens at 10 a.m.

Members are requested to register at once and pay the annual assessment of \$2.00 (payable only for the present meeting).

Members of the profession who wish to become members of the association may hand in their names at any time during the meeting to the secretary, with the names of proposer and seconder.

ORDER OF BUSINESS.—(1) Reading of minutes of last meeting. (2) Election of members. (3) Reading of notes from absentees and communications (4) Appointing of Nominating Committee. (5) General business.

AFTERNOON SESSION—2 O'CLOCK.—President's address, Charles Sheard, Toronto. (1) Treatment of Chronic Endometritis, Conerty, Smith's Falls. (2) Sanitary Science : Some of its Features, W. Canniff, Toronto. (3) Angioma of the Eyebrow, Edmund E. King, Toronto. (4) The General Practitioner and the Insane, J. V. Anglin, Verdun. (5) 1, Some Recent Changes in British Law ; 2, Reform in the Coroner Law, Wyatt Johnston, M. F. Quinn, Q.C., Montreal. (6) Is Alcohol, in all Doses and in all Cases, a Sedative and Depressant ? T. T. S. Harrison, Selkirk.

EVENING SESSION—8 O'CLOCK.—Address in Surgery, W. H. Hingston, Montreal. (1) Displacement of the Kidney, F. R. Eccles, London. (2) Thyrotomy for Large Sub-Cordal Spindle-Celled Sarcoma, with presentation of Case, H. S. Birkett, Montreal. (3) Some Measures for the Prevention of Tuberculosis, P. H. Bryce, Toronto. (4) — H. Hillary, Aurora. (5) Some Unusual Conditions met with in Hernia Operations, James Bell, Montreal. (6) Two Cases of Laparotomy for Unusual Conditions, T. K. Holmes, Chatham.

THURSDAY, 21ST SEPTEMBER.

General meeting opens at 10 a.m.

Election of Members. Report of the Nominating Committee. General Business. Address in Medicine, A. McPhedran, Toronto. (1) Some of the Uses of Sulphurous Acid, H. Arnott, London. (2) Cosmic Consciousness, R. M. Bucke, London. (3) The Prophylaxis and Treatment of Puerperal Eclampsia, C. T. McKeough, Chatham. (4) Three Cases (two sisters and a brother) of Freidreich's Ataxia, to be presented, Geo. Hodge, London. (5) Report and presentation of a recent Case of Successful Cholecystotomy, R. Ferguson, London. (6) — H. A. McCallum, London.

AFTERNOON SESSION—2 O'CLOCK.—(1) The Cause of Blindness in Ontario, A. B. Osborne, Hamilton. (2) Multiple Neuritis, D. C. Meyers, Toronto. (3) A Case of Pernicious Anemia, I. Olmsted, Hamilton. (4) The Anatomical Relations of a Large Malignant Growth in the Neck with Secondary Deposit in the Lung. Illustrated by Frozen Sections, A. Primrose, Toronto. (5) The Rawhide Corset as a Spinal Support, B. E. McKenzie, Toronto.

EVENING SESSION—8 O'CLOCK.—Reading of Minutes. Unfinished and Miscellaneous Business. (1) Ophthalmic Memoranda, A. A. Reeve, Toronto. (2) A Case of Tumor of the Bladder, M. Ahern, Quebec. (3) —, A. E. Praeger, Nanaimo, B.C.

THE CANADIAN PRACTITIONER

EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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RETROSPECT, ASPECT, AND PROSPECT IN MEDICAL SCIENCE.*

BY PROF. A. B. MACALLUM.

THE member of the faculty who is commissioned to deliver the opening lecture has to perform, in some measure, the duty of recording the progress made by the Faculty of Medicine during the previous session. To myself that duty is, for this occasion, an exceedingly pleasant one. The last session was one of hard work on the part both of the Faculty and of the students, and the results, as shown by the examinations, were satisfactory. In those of the University, last spring, the number of those who failed to pass was, on the whole, less than in 1892, although the number of students examined was greater and the examination more severe. But it was in the examinations of the Medical Council that the results of last session's work appeared most decisive. The students who underwent those examinations came from seven medical schools, all of which, with the exception of McGill, are within the Province of Ontario. Now, in the returns of the Medical Council for 1893 I find that, of the 112 students who passed the primary examination, 63 belonged to this Faculty, while

* The Inaugural Lecture of the University Medical Faculty for 1893, delivered October 3rd.

49 came from the six other medical schools. Further, of the students of this Faculty who presented themselves for that examination, 73.3 per cent. passed; while, of the students who came from the six other institutions, only 40.1 per cent. were successful. In the final examination of the Council, 42 out of the 85 who got licenses to practise were students of this Faculty. As 49 of them took that examination, the percentage of pass was 86. The percentage for the six other medical schools was 64.7. The whole constitutes a record with which both the Faculty and the students have reason to feel pleased. It shows also that the Faculty has been adapting its instruction, on the one hand, to what a broad curriculum of a progressive university should require, and, on the other, to the demands of a practical course of study such as the Medical Council aims to exact. The Faculty has, in the past year, endeavored to give a thorough, scientific, practical training to the student, and the results of the University and Council examinations are, in every sense, a full measure of the effort.

There is another aspect of these results which is significant for the future of the Faculty. Our students constituted 41.5 per cent. of all who presented themselves for the Council's examination, while of those who passed 53.3 per cent. were trained by this Faculty. If the latter continues to win results like these for the next ten years, at the end of that time a very large majority of the medical practitioners in this province will be graduates of this University, a distinction which should have been hers during the past thirty years. Without looking so far forward, however, we are justified in stating that, through the Medical Faculty, the Provincial University now exercises an influence in medical education corresponding to that which she exerts through her Arts' Faculty upon the liberal education in the province. And when in the near future she may have to consider the ways and means in the matter of expansion, let us hope that the influence in a new quarter may be of the greatest service to her.

I must not forget to mention that the Faculty has not been unmindful of other matters in which the student is to a very great extent interested. During the last session it recommended to the University Senate such a revision of the medical curriculum as would make it more in accord with that of the British Medical Council and with the trend of opinion resulting from experience as to what medical education should be. The Senate adopted all the Faculty's recommendations. The changes affect only students who begin their undergraduate course now and subsequently. Students will be required to undergo only one examination in subjects in which the former curriculum made two compulsory. Honors under the provisions of the new curriculum are no longer to be given as heretofore, and are in future to be won only in groups of subjects. The examinations are simplified, and in the first the University now insists upon a competent

knowledge of chemistry, biology, and physics before the student passes to the second year. This enables the student to do good, solid work in anatomy without being worried with the task of reading for an examination in that subject, the limits of which could never hitherto be fully defined for a first-year examination. That the University has not given chemistry, biology, and physics undue importance by making them alone the subjects of one examination is shown by the fact that the British Medical Council now requires all students to spend the first academic year in attendance upon instruction in these subjects, and with this regulation all the medical faculties and licensing bodies in Great Britain and Ireland must now comply.

I now proceed to discuss the future of medical science, and the bearing that possible advances in medicine may have upon the student's present course of study. This topic is one on which much may be said, and I take it up now because it is one of absorbing interest, and because, also, it is good for those of you who are preparing for a life of medical practice to be reminded that it is but a small part of your life's work to pass examinations, to acquire a degree and a license to practice, and that you may accomplish these things without, in the end, obtaining the object of your life. The student, as a rule, does not, unfortunately, look more than three or four years ahead, and he is inclined to let the future beyond take care of itself. It does this, but without, however, paying much attention to him who does not employ each year as it passes for that realization of the ideal which is considered to constitute success. All courses of study and all examinations merely insure the lowest standard of attainment that the necessities of the times permit, and beyond this they leave to the student the question of shaping his own career. His success in the future depends greatly on his capacity for foreseeing the wants of the future. Do not misunderstand me when I speak of success. How often do we hear the success of a physician or surgeon estimated by the magnitude of his practice ! How often also do we find that it is his ambition to have a practice which will, in fact, engross all his time ! That is in no sense my ideal of success, nor should it be that of any one who has a proper idea of the dignity of the profession. Success is rather to be estimated by the degree of professional qualifications to which one has attained, and of the recognition by the public of the attainment. The public must not, however, be set up as the final and only judge of success, for sometimes ignorance, sometimes fashion, may make a quack or a sham the idol of the hour. That has happened often in the past, and will, in all likelihood, happen often again. It is, in fact, not the quantity of professional work done, but the quality of it, that is the measure of success.

In discussing the future of medical science, there are two questions

which must first of all be answered : What is medical science, and how far into the future do we propose to dip ? The first question may be answered by the statement that it is that body of knowledge obtained through observation and experiment concerning the origin, course, and termination of disease and the influences which modify it. This is pathology, but in a wider sense than that usually given the term. It includes, in addition to pathology in the narrower sense, the foundation sciences, biology, physiology, bacteriology, and physiological chemistry ; and whatever, therefore, advances these will in a great measure aid in the advancement of medical science. The latter must always be in advance of medical practice, for it will always excel our knowledge of how the controlling influences are to be used or best employed ; but the distance between the two will always depend on the skill and intelligence of the profession as a whole in any one generation.

In regard to the other question, I may say that to discuss the condition of affairs which shall obtain when we shall have ceased to take an interest in them is a performance of simple intellectual amusement, and of no practical advantage to us ; and, as the average length of a practitioner's life ranges between thirty and forty years, a period of thirty-five years, reaching beyond the close of the first quarter of the next century, embraces for us the extent of the future which we may comprehend in the outlook.

How will medical science develop within that time ?

In this forecast I will not attempt to prophesy, for one may do something more substantial than that. We may rely on the progress of medical science during the last thirty-five years, on what human necessities demand, and on the tendencies of research at the present day to guide us in determining the development of some parts of the science at least ; and we have also as an influential factor in shaping its future the appreciation in which medical research is held to-day.

The by far greater part of our knowledge of disease has been established within the last thirty-five years, and if we examine the history of research for that period we will find that any considerable advance in our knowledge in that department has been the outcome of a greater advance in some one of the foundation sciences, physiology, and physiological chemistry in the earlier years specially, and bacteriology and pathology in the later years. I might illustrate what advances these sciences have made by reference to physiology alone. Were an expert physiologist of the date 1860 transported through time to 1870, he would find himself very unfamiliar with the subject in its new form ; and were he to reach 1880 in the same manner as he did 1870, it is extremely doubtful if he would consider it possible to put himself in that relation to his subject in which he was in 1860. It was possible then for him to be an accomplished physiologist,

anatomist, human and comparative, pathologist, and physician at the same time; but in 1880 such a combination of qualifications was an absolute impossibility. During the last ten years more knowledge has been acquired from research in physiology than in all the previous twenty years, and with this accumulation the character of the subject has vastly changed. It was possible in 1880 for an accomplished physiologist to maintain at first hand an acquaintance with all the publications then constantly appearing embodying the results of original research in all departments of physiology; but with each succeeding year that became less and less possible, until now, when the literature annually appearing is so great in extent, that he who attempts such a feat is certain to fail. The periodical and other literature in some one department, as, for example, that dealing with the nervous system, is quite enough to engross his time; while if he wishes to keep himself acquainted with the literature in the other departments, he must depend largely on abstracts and summaries made by others. As a result of this widening of the subject, specialization in physiology has occurred to a very remarkable extent; and where a few years ago we had one species with but few varieties grouped under the genus physiologist, we find at the present day many species, each one rapidly developing into a genus. To-day, instead of the general physiologist, there are the neurologist, the students of the physiology of secretion, or nutrition, or of circulation, each one working in his own particular field of research, which, as investigation goes on, is found to be of vaster extent than supposition allowed.

What I have said with regard to the progress of knowledge of animal physiology is true to a great extent also of histology, bacteriology, and pathology; and it is quite possible that were I as much conversant with the literature and progress in those sciences, an appreciative description of the advances in them, and especially in bacteriology, would meet with a greater assent from you, because of the general recognition, on the one hand, of the immense strides that surgery has, on account of it, made within the last fifteen years, and, on the other, of the fact that through it we know the causes of a very important group of diseases. I do not wish to diminish one whit the recognition of merit which that science has justly as its due, but I would like to point out that it has not been the cause of all the progress which has obtained for the last ten years, for had our knowledge of physiology remained as limited as it was in 1880 there would have been no triumphs in brain surgery; we would not have the knowledge of diseases of the nervous system that we now possess; and the medical treatment of functional diseases would have been as largely empirical as it was in 1875. Bacteriology, indeed, suddenly opened to surgery fields of work from which it was hitherto excluded, and the bountiful harvest that it has reaped has absorbed so much of popular attention

that little is given to the unostentatious progress that medicine has made—a progress, let me say, with all due respect to the surgeon, greater than that made by surgery in the last thirty years.

Now, a comparison of the advances in physiology and pathology for the last thirty-five years shows that in both there has been an immense acquisition of knowledge, and that in each decade the increase has been made in arithmetical, if not in geometrical, proportion to that of the preceding ten years. Bacteriology has also since 1880 in its expansion exhibited the same rate of progress. This advance is one element upon which we must rely in the forecast of the future.

The other element is the appreciation of medical science which obtains at the present day. By this do not understand me to mean popular appreciation, but that enthusiasm which is shown in investigation in all departments of medical science. The additions that are made annually to our stock of knowledge in this line indicate that a host of scientific workers are constantly experimenting, observing, and recording, and that every year the number in the rank and file of investigators is increased by the accession of fresh recruits. That is an appreciation that is certain to continue whether the state countenances it or not.

It is interesting to inquire why medical science is under so little obligation to constituted authority. Why is it that when the state gives endowments for the advancement of learning in languages, mathematics, metaphysics, and the natural and physical sciences, it neglects, as a rule, to give assistance to medical research or medical education? Several reasons are to be urged in answer to this question, and for one of these we must examine the condition of medicine during the first half of this century, when it could not press any such claims to be considered a science as it now presents. While it consisted of much that was valuable, the greater part of it was pure empiricism. This was not all. There arose in the medical world a discussion on questions of a purely dogmatic character that should never have been introduced into medicine at all. Whether like cures like, or whether a disease is cured by a drug which produces the very opposite symptoms, were the questions of the day. There were others on which the very opposite answers were given. Is the therapeutical action of a drug increased the more if it is diluted or shaken, or the more finely it is divided? This discussion first arose in Germany, which gave, at the same time, origin to some other fantastic and absurd creeds in medicine, like Rademacherism, Isopathy, Ideal Pathology, etc., and it spread to England, France, and to this continent. These questions were even taken up by the lay world, and discussed, in some instances, with all the partisanship that characterizes party politics. Then some strove to adopt a position between the two camps, and this added to the confusion. What

wonder is it that the public should, in the end, conclude that there was nothing scientific in medicine; that it was merely a matter of taste in more ways than one as to which school of medical practice you gave your adhesion when you desired medical treatment? Twenty-three centuries ago Hippocrates described a somewhat similar condition of medical practice which obtained in his time. After speaking of some physicians who constantly administer strained decoctions of barley, while others strain the juice through a cloth in order to prevent harm to the patient resulting from swallowing a particle of it; while others, again, give neither the juice nor the thick decoction until after the seventh day, or after the crisis, he says: "Physicians are not in the habit of mooted such questions; nor, perhaps, if mooted, would a solution of them be found; although the whole art is thereby exposed to much censure from the vulgar, who fancy that there really is no such science as medicine, since in acute diseases practitioners differ so much amongst themselves that those things which one administers as thinking it the best that can be given another holds to be bad; and in this respect they might say that the art of medicine resembles augury, since augurs hold that the same bird, if seen on the left hand, is good, but, if on the right, bad" ("On Regimen in Acute Diseases"). In the days of Hippocrates, the introduction of creeds and dogmas into medicine and the consequent contempt of the vulgar did not matter; but the attempt made within the last one hundred years to introduce dogma and fanciful theory has resulted in retarding the development of medicine as a science of observation and experiment; and even at the present day, when we are not troubled so much with denominationalism in medicine, it has helped to prevent that recognition to which the science is entitled from the state.

Another reason for the indifference shown by the state to medicine and medical research, especially on this continent, is the fact that instruction in medicine has been very largely conducted and controlled by proprietary institutions. As these were managed for financial gain, it is manifest that they would spend as little as they could in equipping laboratories which cost money. It was to the interest of many of the teachers to teach the professional subjects well, for their own reputations were enhanced; but in instruction in the sciences there was very little of such inducement, for the air was full of talk about "practical" things and against "new-fangled notions." These institutions turned out a large number of medical practitioners, among whom were undoubtedly good men; but the ideas of many of these graduates concerning medicine and medical science could not be higher than those of the institutions from which they received their education. The advocates of the endowment of medical research have had to contend, therefore, with a confused public opinion, backed by the inertia of

at least thirty thousand practitioners, and also with schools and colleges of medicine whose craft was endangered. According to a lecture recently delivered by Professor DaCosta, the number of medical schools and colleges in the United States constitutes the greatest enemy of medical progress, for the weaker ones, in order to have students and live, keep the standard down. A few years ago there were nearly three hundred of them, and they now number about one hundred and forty-five. As there are but about twenty-five medical schools and faculties in Great Britain and Ireland for a population of 38,000,000, it is obvious that if the same proportion obtained in the 65,000,000 population of the United States there would be about forty-five such institutions. Professor DaCosta says that they die at the rate of three a year, according to which it would take over thirty years to get rid of the not only needless, but harmful excess. The majority of them confer the degree of M.D., although they have no university connection whatever, and we owe to such a condition of affairs that the American medical degree receives so little respect the world over. We may find in this condition also the cause of the failure of American universities to mould professional life, at least in medicine. Of late years efforts have not been wanting to bring medical education under the control of the state and other universities, and when such a result is fully attained no doubt the standard of efficiency in medical education will at once rise. We in Canada have all but succeeded in that respect, but the present condition of things was opposed by some who, for various reasons, object to the university and state control of medical education, nominally on the ground that the latter is "professional." "I think nothing human foreign to me," said the Roman of old, and our present-day culturists subscribe to the sentiment and urge the state to endow the study of language, of which but less than one per cent. of the population receive the benefit, while they are ready to oppose granting state aid to the study of pathology and sanitary science, by which every unit of the population would be benefited directly or indirectly.

A third cause of the failure of the public, through constituted authority, to support medical research is the prevalence of a spirit very much like that of fatalism. It is a harsh term to employ, and I use it apologetically, although I cannot find a milder one that befits the situation. In the east, where cholera and leprosy find a permanent home, there is an extraordinary apathy regarding them. No effort is made on the part of the natives to prevent the occurrence and spread of these diseases, or of any other, for that matter. Why should they, when they regard these as ordained by fate? What is the use of fighting against fate? We wonder and are perplexed at the phase of character presented, without thinking that we of the west, as a whole, exhibit the same.

(To be continued.)

DISEASES OF THE STOMACH : THE MOST RECENT
METHODS DEvised FOR THEIR DIAGNOSIS AND
TREATMENT.*

BY ALEXANDER MCPHEDRAN, M.B.,

Assistant Professor of Medicine and Clinical Medicine, University of Toronto.

Mr. President and Gentlemen :

I have, in the first place, to express my grateful thanks to the President of this Association for the honor he has done me in requesting me to deliver the address in medicine on this occasion ; while at the same time I am deeply sensible of my own inability to discharge the duties with that erudition, that broad grasp of the greater questions in medicine, which an address on such an occasion as this should embrace in its purview.

In casting about for a subject that would be of general interest, of those that occurred to me I deemed that a discussion on the more recent methods devised for the diagnosis and treatment of diseases of the stomach would be most suitable. Strange though it may appear, it is a department in which little is done at the meetings of our associations.

The digestive process is one of such complexity that although much has been cleared up, especially during the last few years, there yet remains much to be explained and elucidated. Beginning at the mouth, the process of digestion is carried on during the passage of the food through the stomach and the greater portion of the intestinal tract, and defect in any part of the course may disturb the process in the whole, and thereby furnish products to the circulation, which may evolve a train of symptoms most distressing and complicated.

Formerly, the major part of the function of digestion was assigned to the stomach, and it was considered that little could go wrong so long as *its* work was effectively done. While the latter is to a great extent true, yet later investigations have shown that nature, in view of the importance of the proper digestion of the food, has been very liberal in her provision for effecting this purpose. A double provision is made for the proper solution of each of the three great classes of food, viz., the farinaceous food by the saliva and the pancreatic juices ; the albuminous by the gastric and pancreatic juices ; and the fats by the pancreatic juice and the bile. In view of these facts, and for the further reason that after the removal of the stomach some of the lower animals continue to have a comfortable existence, some have come to regard the pancreas as the most important organ of digestion, and to view the stomach as little more than a receptacle and "warming pan" for the food. This is the swing of the pendulum to the

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opposite extreme. We have abundance of clinical evidence to prove that the importance of the stomach cannot be overestimated ; that an active performance of its function is essential to perfect digestion and our well-being.

The stomach may be said to have a threefold function to fulfil :

(1) To receive the food and lead partly to the conversion of the amylaceous and albuminous portions into absorbable bodies ; the amylaceous change being effected by the saliva, and the albuminous by the gastric juice—the process being completed in the intestine.

(2) By its acidity to protect the food from fermentation and decomposition.

(3) To discharge its contents, partly by absorption into the blood, but mostly through the pylorus into the duodenum after its own share of the digestion has been completed ; the discharge occurring gradually, so as not to overload the duodenum.

In health, for the first three-quarters of an hour after food is received into the stomach, the hydrochloric acid of the gastric juice enters into combination with the albuminates of the food, so that no free acid is present. During this time the digestion of the starchy food is actively progressing, and is only arrested by the presence of free hydrochloric acid, nearly an hour after the meal is taken. In hyperacidity, or a hypersecretion of the gastric juice, free hydrochloric acid is present sooner than normal and arrests the digestion of the starches prematurely, and thus increases their liability to fermentation. In such circumstances the filtrate of the stomach's contents will give a reaction with Lugol's solution, proving that the digestion of starch has been interfered with ; normally, no such reaction is obtained. The imperfect change in the starch might be due either to a deficiency of ptyalin, or an excess of acid ; and as the former is probably never defective, the occurrence of the reaction practically demonstrates excess of hydrochloric acid in the stomach.

The second function of the stomach, viz., the prevention of fermentation and decomposition, is one of the most important. While the digestion may be effected by the pancreatic and other fluids, none of them have the anti-fermentative powers of the gastric juice. With our food we swallow innumerable micro-organisms, especially those that cause fermentation and decomposition, but also pathogenic germs as well. Some of these are destroyed in the acid medium in the stomach, others are inhibited ; this is true especially of the fermentation germs. Many, however, especially the pathogenic organisms or their spores, unfortunately pass through unaffected.

Persons are occasionally met with in whom no hydrochloric acid is found in the gastric juice, and who, nevertheless, have fair digestion ; in such

the motor function of the stomach seems to be abnormally vigorous, causing the food to be discharged into the duodenum before decomposition can take place.

The amount of hydrochloric acid secreted increases in proportion to the amount of albuminous constituents in the meal, the maximum amount being reached about an hour after a light meal and four or five hours after a heavy one.

In health the duration of digestion varies with the quantity and quality of the food taken. In about six hours after a medium meal of mixed character the stomach will be found empty, or to contain only some shreds of food ; even after a full meal the stomach should be quite empty in seven hours. In infants the duration in health is probably not longer than one or two hours.

In the intervals between digestion, the stomach contains a small amount of clear neutral fluid, without hydrochloric acid or pepsin.

Derangements of any function of the stomach are characterized in some by few symptoms, while in others disturbances of the greatest diversity are produced ; such as neurasthenia, vertigo, insomnia, epileptiform convulsions, headache, catarrhal affections of the respiratory tract, pseudo-angina, joint affections of a rheumatic nature, rigors, etc. It doubtless occurs in the experience of all to meet with cases of these various kinds caused by defective digestion, the true cause often eluding our search. Just as the stomach is the organ at fault when the symptoms produced indicate other organs, so in many cases of apparent stomach disorders entirely different organs are involved.

In many persons with grave derangement of the gastric functions, complaint is made only of slight disturbance of general health, while they assure us that their digestion is quite good. This variety of symptoms is to be accounted for partly by the variation in the sensitiveness of the stomach, partly by the greater susceptibility of other organs to reflex disturbances, and partly by the almost infinite variety in the character of the poisons that result from the decomposition of the food. That many different poisons may be formed in the digestive tract and excreted by the kidneys has been well shown by Bouchard. He found that the urine of a perfectly healthy peasant, employed in the open air, produced no symptoms when subcutaneously injected into a mouse ; but if the peasant's digestion were slightly deranged, so that the tongue became furred, the taste a little foul, and the bowels constipated, the subcutaneous injection of the urine then resulted in convulsions in some instances, while at other times coma was produced. Entirely different poisons must have been elaborated in the stomach and intestines to produce such a variety of effects. And of what a variety of symptoms in dyspepsia patients may be relieved by an

effective purge—mental depression, headache, insomnia, fugitive pains, nervousness, ill-temper, etc.

A very large proportion of disease and suffering is due to imperfect assimilation and to absorption of toxic substances, on the one hand, and to defective elimination of waste of tissue and of imperfectly elaborated food products, on the other. While it is far from true that all our ailments are connected with, much less due to, derangement of these two functions, yet he is a wise physician who never loses sight of the importance, in every case, of carefully examining the avenues of supply and waste. Besides the diseases due to derangement of these functions, there are many, primarily not in any way dependent on them, through which he can hope to pilot his patient to the haven of health and comfort only by maintaining these functions in the best possible condition. Then, again, there is no disease to which they do not bear, at least secondarily, a close relationship.

It has been said, and with much truth, that "our feelings are the greatest liars in the world." With almost equal truth can this same charge be laid against the general symptoms of nearly all diseases. Of no diseases is this more true than of those of the digestive system.

Until the last decade or two the knowledge of digestion and its derangements was drawn from experiments, from symptoms, and from occasional accidental conditions that exposed the stomach to view, as in the celebrated case of St. Martin, so well studied by our distinguished countryman, Beaumont. The introduction of the stomach tube for purposes of diagnosis by Leube, in 1871, began a new era in the pathology of diseases of the stomach. By its use we place ourselves in direct communication with the stomach. By removing its contents from time to time and examining them, we may satisfy ourselves of the condition of the stomach and its functions with almost as much certainty as of that of the mouth or other visible part. We only need the knowledge to make use of the material at hand. The stomach tube is not a recent invention. John Hunter, more than a century ago, used it to inject irritating substances into the stomach; later, it was used to empty the stomach in opium poisoning. However, it is only in recent years that it has been used for purposes of diagnosis and treatment in ordinary diseases, and even yet its use is much too restricted. A decided step in advance was made when Ewald,* in an emergency, first used a soft rubber tube. A man was brought to his clinic who had poisoned himself with hydrocyanic acid. None of the standard hard tubes were at hand, and, as immediate emptying of the stomach was imperative, a piece of ordinary gas tubing was taken, the ended rounded, two eyelets cut in it, and then passed into the stomach. He found no difficulty in passing this soft tubing. Since then the use of the soft rubber

* Diseases of the Stomach.

tubes has become very general. They vary in size, the larger being about one and one-half inch in circumference, open at the lower end, having one or two large fenestra low down ; several small openings also add to its efficiency, as they allow the stomach's contents to filter into the tube from all sides. In the majority of patients these tubes are passed without difficulty ; but in some, from spasm of the esophagus, or other cause, it is necessary to resort to a firmer tube, such as a varnished silk web one. In a case recently even this could not be passed through the cardiac end of the esophagus on account of the spasm ; yet a second trial two days later was quite successful with a soft rubber tube. Such tubes possess the additional advantage of being practically safe, there being little, if any, liability of injuring the stomach or any other soft part, even if in an unhealthy condition. Even aortic aneurisms pressing on the esophagus should be safe from rupture, as little impediment will arrest the progress of the tube. It is a matter of no little importance that the use of the soft tube is less objectionable than of the hard one, as it is not necessary in using it to pass the fingers into the mouth, the end of the tube being simply passed back into the pharynx, when, on swallowing, it is grasped by the faucial muscles, when it should be pushed onwards rapidly into the stomach. It usually passes on into the stomach easily, but a choking sensation may be produced. Waiting while a long breath or two are taken usually suffices to overcome this strangling feeling, but not always, and the tube may have to be withdrawn. I do not wish to minimize the difficulties, which are sometimes insurmountable, but we need rarely have any fears once the consent of the patient is obtained ; that is oftenest the insurmountable difficulty. Quiet confidence on our part usually suffices to overcome all difficulties. In the nervous a cocaine spray to the pharynx may overcome uncontrollable irritability.

Having passed the tube into the stomach the contents can usually be obtained by expression, but sometimes patients lose control of the abdominal muscles, and cannot compress the stomach so as to force the contents through the tube. In such, some form of aspirator should be used—an ordinary family syringe may suffice. Sometimes the failure is due to introducing the tube too far, and withdrawing it a few inches slowly is often successful.

It has been objected that the use of the stomach tube is disgusting, offending the refined tastes of the better class of patients. But viewed in that light, how much more disgusting is a rectal, or even a vaginal, examination ! Fear, not disgust, is the prevailing feeling against its use ; at least, so far as my experience goes. It is a matter of education. Were we to regard, as we should do, the examination of the stomach, in diseases of the digestive organs, as essential as does the gynecologist the examination of the

uterus, the idea of its being offensive would never occur to either patient or physician. This is more than can be said of the work of either the rectal surgeon or the gynecologist. Furthermore, were the use of the tube duly frequent, most persons suffering from digestive disturbances would soon come to regard examination of their cases as defective until recourse had been had to its assistance. It can be used in delicate ladies and fastidious gentlemen with as little difficulty as in the baser sort. However, it will take time to educate, not only the public, but more especially ourselves to its great importance in diagnosis and treatment. It seems to me that the greatest difficulty to be overcome is not the reluctance of our patients to submit to such examination—that difficulty will be overcome as soon as we convince them of the importance to *them* of such procedure—but the chief difficulty is in our own defective training in the requisites to enable us to make the necessary chemic examination of the stomach secretions when they have been obtained. This question will impress on us the urgency there exists for a fuller and more thorough training of all medical students in chemistry, especially physiological. It is being more and more driven home to us that to keep abreast with the advancing knowledge of pharmacology and pathology, especially of the physiologic processes, the physician of the future must be possessed of a much greater and more thorough training in the chemic and physiologic laboratories than it is our privilege to obtain.

For accurate scientific examination of the stomach secretions, considerable time and fairly extensive laboratory appliances are requisite; so that, for most physicians in active practice, easy and approximate results will have to suffice; and for the treatment of most cases, such results will meet our needs on the whole satisfactorily. If it be objected that to be useful and reliable our results should be accurate, I would remind you that few of us insist upon such accuracy in urinary examinations. How few ascertain the amount of albumin by weight, or estimate precisely the amount of urea in the urine. Yet we find it necessary to know approximately the state of the urine in most diseases; we find such estimates usually all serve practical purposes. So in time I have no doubt that we will not be satisfied without a general estimate of the stomach secretions in diseases affecting the digestive tract, leaving exact analysis for the well-equipped laboratories.

In any given case, or in comparing different cases, in order to obtain results from which useful conclusions can be deducted, it is self-evident that examinations must be made under similar circumstances as to food, time after eating, etc. An abundance of albuminous food calls for an abundance of gastric juice to saturate it—much more so than a light meal of farinaceous material. An examination, therefore, after a mixed meal

will give much more complicated results than after one of a lighter nature, and the results would probably be more useful. To obtain uniform conditions, Ewald advised examination after a "test breakfast," consisting of a dry roll, or a round of toast, a cup of water, or of weak tea or coffee without milk or sugar. This furnishes nothing to become offensive should decomposition take place, yet it contains all those classes of food, and what remains to be aspirated after an hour's digestion is of such a liquid nature as to pass through the tube easily. It is, however, often desirable to withdraw the contents of the stomach after ordinary meals to ascertain the time required to complete the digestion of a meal, so far as the stomach is concerned, or whether the stomach disposes of one meal before another is taken. It is not unusual in some persons to find in the stomach the remains, often copious, of the food taken during twenty-four or even forty-eight hours, and that, too, without producing much conscious disturbance.

The contents of the stomach, if withdrawn during the first thirty or forty minutes of digestion, should owe its acidity to lactic acid, as can be easily demonstrated by Uffelman's test with a solution of carbolic acid and chloride of iron; after an hour's digestion the lactic should be replaced by hydrochloric acid, with more or less acid salts. The total acidity should be within certain defined limits, either above or below which indicates an abnormal condition. The presence of free hydrochloric acid is readily demonstrated by Gunzberg's test with phloroglucin-vanillin solution. Experience with it enables one to judge fairly well, by the depth of color obtained by the test, as to the amount of hydrochloric acid present. To be more accurate, we can, by successively diluting the stomach contents until the reaction to Gunzberg's reagent fails, obtain a fairly approximate estimate of the quantity of free hydrochloric acid present, since we know that this reagent will act until the dilution reaches one to twenty thousand.

Now, while it is of the utmost importance to be able to make ourselves acquainted with the constituents of the gastric juice at various periods after a meal, especially as to the presence of hydrochloric acid in normal amount, or its absence, we must not forget that failure of secretion of hydrochloric acid, on the one hand, and its excessive secretion, on the other, are alike only symptoms of disease—symptoms whose import, to be rightly estimated, must be weighed in conjunction with the other circumstances of the particular case. But a short time ago it was considered that the persistent absence of hydrochloric acid was particularly pathognomonic of carcinoma. Further investigation has demonstrated that hydrochloric acid is not infrequently absent in gastric catarrh, in degenerations of the gastric mucosa, and in certain gastric neuroses. On the other hand, cases of gastric carcinoma are met with in which free

hydrochloric acid is found after food, and in a few it is present in excessive quantity. In these latter, it is supposed that the cancer is secondary to, and develops on, the cicatrix of a gastric ulcer, in which latter disease we know that the gastric secretion is usually highly acid. The reason for this difference in these two classes of cancers is probably due to a widely disturbed degeneration and inflammation of the gastric mucosa in the former class, while in the latter changes in the mucous membrane are limited to the immediate vicinity of the neoplasm.

We are, nevertheless, fairly safe in laying down as a rule that while the absence of hydrochloric acid is not pathognomonic of cancer, its persistent presence is strong evidence that cancer does not exist.

Then, it will probably be found that in cases of doubtful diagnosis between cancer and chronic gastric catarrh, the effect of treatment with the stomach tube will be of material aid. In such cases the regular daily washing out of the stomach will be followed by general improvement in cases of simple chronic gastritis, while in cancer the improvement is usually confined largely to some relief of the stomach symptoms, without much gain in general health.

In such a case under my care in Toronto General Hospital a year ago, in a man who was much addicted to beer drinking, and whose symptoms were those of aggravated chronic gastric catarrh, no improvement resulted from lavage. There was no pain, tumor, or cachexia to indicate cancer, but his condition grew worse steadily. He left the hospital, and a month or so later died at his home. The autopsy showed a diffuse colloid cancer infiltrating nearly the whole wall of the stomach, and the general cavity was much contracted, a contraction that must have resulted chiefly after he left the hospital, as shortly before that time the capacity of the stomach was apparently normal.

The tube will, however, find its most frequent application both in diagnosis and treatment in that most common of "ills that flesh is heir to"—dyspepsia. By its use we are able to differentiate those characterized by hyperacidity from those more frequent ones in which there is a deficiency of hydrochloric acid secretion, and thus be guided to the treatment appropriate for each.

In the former we need to reduce the amount of sodium chloride in the food to a minimum, to neutralize the acidity of the stomach by use of such alkalies as magnesia and the alkaline carbonates, which contain none of the elements of hydrochloric acid, and to diet mainly on nitrogenous food, so as to appropriate the greatest possible amount of hydrochloric acid in its digestion.

In those suffering from in acidity, on the other hand, we must supply the deficiency in hydrochloric acid by giving it after food as freely as each

individual demands, usually in frequent, divided doses, and, it may be, peptonizing the food before it is partaken of—appropriate general treatment, of course, being carried out at the same time.

Of the dyspepsias, the most frequent are those associated with and dependent upon chronic gastritis. Here, too, no means of treatment avail as does thorough and regular cleansing of the stomach by means of the tube. Usually the appetite is poor, but it may be at times good, even ravenous; at others the first morsels or even the sight of food satisfies, or may beget nausea. "Soon after eating, such patients feel oppressed and bloated; they do not complain of true pain in the epigastrium; it is more of a choking, a vague sensation, which only becomes slight pain on pressure over the stomach." If decided pain occurs, we should suspect other lesions. These conditions are frequently combined with atony of the stomach wall; this leads to an undue stay of the food in the stomach. Decomposition results, the starches fermenting and the nitrogenous substances putrefying. Distension of the stomach results, with eructation of offensive gases, and regurgitation of sour and acrid liquid and masses of food. We cannot well conceive of a condition more suitable for the use of the tube than this. By its use we remove the decomposing remains of food that may have lain in the stomach for days; also the mucus lying in and adhering to the walls of the stomach, and the acrid fluid bathing alike stomach and contents. The relief that such cleansing gives to the sufferer none know but those who have experienced it.

Alkaline and antiseptic solutions have been advised, but plain water suffices for every purpose. The douching is continued, alternately pouring water into the funnel and allowing it to run off until the water comes away clear. Once daily is sufficient. In the absence of atrophy of the mucous membrane, the improvement from such lavage is usually rapid. The irritants that keep up the inflammation are removed; the douching stimulates the gastric gland secretion, which is less in proportion as the mucus is abundant; it also stimulates muscular activity, and these, in their turn, beget a healthier nutrition of the whole gastric mucosa.

With proper diet this will suffice to cure many cases, but it is best to aid it with general treatment, stimulating aromatics, massage, electricity, change of scene, etc., as feasible.

I am decidedly of the opinion that no single plan of treatment will give as good results as this in alcoholics, in all of whom chronic gastritis exists, usually in a marked degree. The douching improves the state of the stomach, begetting better digestion and assimilation; as a result, nutrition and excretion are better, and the nerve centres become more able to resist the demand for alcohol, which, as a result of the better nutrition, grows less and less with time. In such a case, a grave one, lately under

my care, the use of the tube every second day for four weeks was attended by the most gratifying results.

In the digestive disturbances of infancy, especially in the summer diarrheas, medical literature furnishes us with a most convincing mass of evidence in favor of cleansing the stomach with the tube, and thus cutting off the supply of irritant matter to the intestinal tract. The removal of such irritants from the stomach by whatever means, at the same time that the bowel is emptied of its decomposing contents, should suffice to cure most cases if done sufficiently early.

If with the chronic catarrh there be also dilatation of the stomach, lavage is the only course that avails. It is the sovereign remedy. In chronic cases with much dilatation, even it will fail to restore the stomach to its normal capacity; but, in any case, it will, if effectively carried out, relieve the inflammation of the mucous membrane, prevent decomposition, and improve digestion. Combined with massage and electricity we may, even in severe cases, if not too chronic, obtain a complete cure. While the douching is being done, massage of the abdomen should be used so as to empty any sacculations of the stomach and assist in dislodging masses of adherent mucus and food, the douching to be continued until the water comes away clear. It is best done before breakfast, once a day being sufficient, or six or seven hours after a meal, so as to give time for digestion. Effective washing relieves or improves the nausea, the depression, the headache, the disgusting vomiting of fermented food and mucus, etc., that give so much distress. In these cases constipation is usually troublesome. One of the benefits of the use of the tube is relief of this constipation especially early in the treatment. So constantly does the relief occur that Kussmaul considers its absence an ominous sign of advanced degeneration of the stomach wall, or of stenosis of the pylorus.

In the majority of cases of dilatation from pyloric obstruction from carcinoma much benefit results from regular use of the tube, though less, of course, than in chronic gastritis. In some, however, and they have been those in whom there was extensive infiltration of the walls of the stomach, the distress produced by the entrance of the water even in moderate amount rendered the continuance of the treatment inadvisable.

Excellent results have been reported from the use of the tube in gastric neuroses. The alternate douching and emptying acts as massage on the stomach wall, and has a soothing effect on the hypersensitive nerves, just as massage of an external part often relieves pain. At the same time any remnants of food and mucus which may act as irritants are removed; the warm water acts as a soothing bath; and the impact of the water stimulates peristalsis, and this always improves both circulation and secretion.

Its use is said to be sometimes equally gratifying in reflex vomiting, especially in pregnancy, the patient being fed through the tube.

Recently considerable use has been made of the electric currents, both galvanic and faradic, in diseases of the stomach. There is good evidence that even the application of both poles to the abdominal walls stimulates the action of the stomach, but the more direct application of the current, by having one pole in the cavity of the stomach, is much more effective. By moderately distending it with water, plain or saline, and introducing one electrode into the stomach, while the other, a large one, is placed on the epigastrium, its walls can be brought into the direct circuit of the current. By means of the sedative effect of the constant current, some cases of gastralgia may be relieved. The interrupted current is, however, of greater use and wider application. With one electrode in the stomach, peristaltic action is stimulated, and it is thus of much use in atony and dilatation. In many cases the appetite and digestion are improved by its use; there seems to be a freer flow of gastric juice, and more vigorous contraction of the stomach walls. Of course the good results may be partly due to the general effect, both physical and mental, on the patient. I have, at all events, found considerable good result from the faradic current as used in atony of the stomach.

Much that I have said may appear commonplace and elementary; but my subject, of necessity, has to do with the commonplace—with the receiving of supplies, preparing and distributing them to the various organs of the body. What has been uninteresting in it has been due, I am aware, to the manner in which it has been presented to you. It has been said that four-fifths of all the ailments for which treatment is sought are due to functional disturbances, the remaining one-fifth to organic disease. Of these four-fifths, such a large proportion is due to derangements of the digestive process that the subject becomes one of surpassing importance. Without careful examination of the functions in health and disease, we cannot hope to thoroughly comprehend it, and it is only by the more minute investigation of the stomach contents that any advance in our knowledge of these diseases can be looked for. Moreover, it is a subject which all have to consider in daily practice. While it belongs to the general practitioner *par excellence*, yet it is one that the surgeon cannot ignore, and every specialist must take cognizance of it daily, as it may bear an etiological relationship to many of his cases. It cannot, therefore, become the special preserve of any specialist.

If I have said anything to stimulate to a more earnest, painstaking examination into this much-neglected, though most important, subject, the object of this address is attained, and I close with a feeling of having occupied your time to some purpose.

A CASE OF ELONGATION OF THE EPIGLOTTIS.*

BY PRICE-BROWN, M.B.,

TORONTO.

In the treatment of the case I now report, I am much indebted to Dr C.C. Rice, of New York, for a paper read by him last year at the annual meeting of the American Laryngological Association, entitled, "The troublesome symptoms caused by the enlargement of the epiglottis, and the advisability of reducing the size of the cartilage by operative measures." I was much impressed by his article, as I had on several occasions treated patients for laryngeal disease in which the epiglottis presented either an abnormal development or some unusual feature in reference to position.

In no case, however, up to the time of writing, have I found it advisable to operate, except in the one which I have the honor to report to you to-day. And in this case, owing to it being more one of malposition than malformation, I was obliged to resort to the method which Dr. Rice, at the time of the preparation of his paper, considered unadvisable, namely, the use of the galvano-cautery.

On Feb. 27th, 1893, Miss M., aet. 23 years, tall and slight in figure, presented herself for treatment. Family history was not good. Although both parents were living and healthy, yet on the father's side there was extensive tuberculosis. Two of her brothers likewise had died of consumption between the ages of 20 and 30 years. Patient herself had been delicate from infancy; and according to the statement of her family physician, the apex of her left lung had already been diseased twice. During early childhood her respiration had been of a whistling character; and throughout life she had been subject to throat colds, attended by marked hoarseness. Sometimes this amounted to complete aphonia, lasting for a period of one or two weeks. One other interesting feature was the difficulty the patient had always experienced in freeing the throat from mucus.

Two years prior to consulting me, her physician sent her to Colorado Springs for six months. She returned much improved in general health, but with little amelioration of the throat symptoms.

When she came for advice, she had been free from cold for several weeks. Laryngoscopic examination revealed a healthy larynx, so far as could be seen. The epiglottis, however, was long and narrow, with the end turned up, and occupied a completely horizontal position. During ordinary respiration, the whole of the free end pressed against the posterior wall of the pharynx; while on forcible inspiration or expiration, it was

*Paper read at the Laryngological Section of the Pan-American Medical Congress, Washington, September, 1893.

raised slightly, seemingly enough to admit the passage of a narrow knife blade. The whole larynx was deeply seated, and it required two and one-quarter inches from the right angle of the laryngeal probe to reach the tip of the epiglottis.

Fortunately, the patient was tractable. The manipulation of the parts was tolerably easy; and as a good view could be obtained, I considered the case a favorable one for operation.

On March 1st, after applying a 15 per cent. solution of cocaine, I made the first tentative touch with the galvano-cautery, watching carefully for pseudo-membranous inflammation or edema as possible results. The reaction, however, was slight, and on the 4th, during forcible breathing, I slipped the galvano-cautery blade between the epiglottis and post-pharyngeal wall. Then drawing the former forward by means of the instrument, so as to free the pharyngeal surface, I cauterized the central margin and also the left side of the tip. The operation was followed by sloughing and acute congestion of a mild type, but no edema. I operated upon the remaining portions on the 18th and 29th. Throughout the treatment, simple albolene sprays were used to the throat several times a day. At no time was the reaction very strong; and owing to the effect of the cocaine, the operations were not only painless, but the epiglottis itself remained immobile during the cauterization; enabling the operator to limit as he might choose the amount of work done.

During the whole course of treatment, the deglutition of fluids was not interfered with to any marked degree. Of course, solids were interdicted for several days after each application of the galvano-cautery.

The shortening of the epiglottis amounted to about one-quarter of an inch, leaving as a result a perpetual niche of about half that width.

On April 1st, as the patient was in need of general recuperation, I allowed her to return home, to a town 100 miles distant. There was still a protruding corner that I did not like, so I arranged for her to come for further treatment later on.

Accordingly, she visited my office again on June 6th. The epiglottis during the interval had entirely healed, and, although she had suffered once or twice from cold, this had not, as formerly, been attended by hoarseness. I found, however, as I expected, a little projecting nodule on the left side. This I touched twice with the galvano-cautery at an interval of three days. The healing was more rapid than formerly, and in ten days the young lady was well enough to return home. On final examination before her departure, the sloughs had separated, the epiglottis was uniform in length and regular in outline; and although the organ was still, and probably ever would be, in the horizontal position, the vocal cords could both be distinctly seen, something that was quite impossible previous to the cautery operations.

Six weeks later I heard directly from my patient's mother that, physically, much progress had been made, and that the throat itself was now quite well.

In reference to the advisability of using the galvano-cautery in the treatment of cases of this kind, it must be said that the experience gained by the history of one case is not sufficient to establish a rule. Malposition to the extent and in the form described is probably exceedingly rare. It was fortunate in this case that the epiglottis was both narrow and thin, facilitating operation, and reducing to a minimum the probability of edema. If, on the other hand, the organ had been broad, or thick, or hypertrophic, caustic treatment would certainly have been more dangerous ; in view of possible pseudo-membranous inflammation, or edema of the inner surfaces of the larynx. I have on several occasions seen extensive edema of the palate and uvula resulting from galvano-cautery operations on the tonsils ; and if a like result should occur to the ary-epiglottic folds or ventricular bands, from similar treatment of a thickened epiglottis, the end would scarcely justify the means. In well-selected cases, however, there are several facts in favor of this method of operating which would seem well worth considering. Sufficient time for thorough and careful treatment is an all-important requisite for a successful issue. Then the operations can be performed bit by bit ; and by having the patient under daily observation, the parts can be kept under perfect control. There is no bleeding to interfere with examinations ; and when cocaine of sufficient strength is applied, we have not only immobility of the epiglottis, but likewise freedom from pain. To this might be added that the chiselling may be done so perfectly as to challenge comparison with the normal epiglottis.

For cases in which, for various reasons, the galvano-cautery might be unsuitable, I would suggest the construction of a rectangular epiglottome, in which the teeth would merely transfix the epiglottis without drawing it through the ring, as in tonsillotomy. The amount cut off by the blade would thus be under the complete control of the operator. If trimming of the margins was still deemed necessary, this could be accomplished by the galvano-cautery after the healing of the primary wound.

Selected Articles.

HYPERTROPHIES AND DEGENERATIONS OF CICATRICES AND CICATRICIAL TISSUE.

FROM a paper read by Dr. John Collins Warren, of Boston, before the American Surgical Association, and which appears in the *Annals of Surgery* for September, we take the following :

The material by means of which a defect in the integuments is repaired is known as a cicatrix, and consists of a new formation of connective tissue covered by epidermis. In tracing the evolution of this new tissue we find that it is formed from the fixed cells of the connective tissue, and from the cells found in the walls of the small blood vessels. These cells, when in a state of reproductive activity, are known as fibroblasts, and it is from them that the new tissue is formed which firmly holds the edges of the wound in apposition.

The process does not, however, cease with the closure of the wound, for if we watch the cicatrix during the next few weeks we find that the line of union has, in many cases, become much more marked, and that it is the seat of a distinct growth of tissue by means of which it is raised above the level of the surrounding skin. There is an increase in the vascularity of the part, and the bright red color which results gives it an unusual prominence, which threatens, when the scar is situated in exposed regions, to become the cause of an unsightly deformity. The new formation appears, however, to be merely a provisional one ; gradually the swelling diminishes, the new tissue shrinks back to the level of the surrounding integument, and the bright color fades away.

If we examine a wound at the end of the first week of the healing process, we find remarkably little change in the tissues. A line of small round cells, which take the staining fluid readily, serves to indicate the point in the section where the edges of the wound have been brought together, but there is as yet no further change. It is not until the end of the second or third week that the tissue, known as cicatricial tissue, can be found, and the period of full development is really much later than has usually been supposed. In fact, it would not be an exaggeration to say that the process of cicatrization requires a full year for its complete evolution; that is, for that point to be reached at which no further changes are likely to take place.

At the end of a few weeks, however, we are able to see a well-developed cicatricial tissue. This consists of a connective tissue and an epithelial portion. The fibres of the connective tissue are packed together in bundles, which interlace one another in various directions. At times the fibres run singly in very small bundles, and are so interwoven as to form a fretwork. This is in striking contrast to the arrangements of the fibres of the adjacent corium.

The elastic fibres, which are twisted about the bundle of fibres in the normal cutis, are wanting, being rarely replaced when once destroyed.

The interlacing bundles of fibres leave no space for adipose tissue or glands, and give to the cicatrix its characteristic density. Old scar tissue is sclerotic, and does not color as readily as the normal cutis, and we see comparatively few cells, but in the early stages of development the cells are numerous, and can be found in clusters here and there, surrounding the blood vessels which run between the bundles of fibres.

The papillæ are never completely reproduced, and we see at certain points wavy lines of epidermis underneath which loops of vessels lie, but these are not genuine papillæ. A thin layer of epidermis, the lower border of which is represented by a more or less horizontal line, is the usual covering of a scar.

The glands are not entirely destroyed, as many of them lie deep. The ducts of the sweat glands may often be seen on the surface of scars, and hair follicles, with lanugo hairs and sebaceous glands, are occasionally seen. These epithelial structures often play an important part in the epidermization of a cicatrix.

The vessels of a fresh scar are very numerous, particularly the capillaries. If the wound has united by first intention, they run horizontally; but if the wound has closed only after a slow process of granulation the vessels, generally speaking, ascend vertically towards the surface, and form there a rich anastomosis, which gives to the scar its characteristic hue. (Winiwarter.*)

Lymphatics are not usually found, and nerves are rarely seen, although Robin describes them, and Jobert attributes the sensitiveness of some scars to rudimentary nerves which form there. The occasional presence of a large nerve fibre may give rise to more serious symptoms. The color of a scar may become a bluish red or violet; it gradually becomes paler, and assumes a yellowish tinge, and finally a pure white. More rarely there is a deep yellow or brownish color, or some deeper pigmentation. It may have a mottled appearance, due to the presence here and there of patches of epithelial cells in the granulating surfaces. The presence of grains of powder produces a marked discoloration. Scars rarely disappear

*Deutsche Chirurgie. Lieferung 23.

entirely, although this occurs not infrequently in scars formed during early childhood. Usually they remain as a fine, white line ; or, if the scar has stretched, as it frequently does when there is tension, the line becomes a band. Scars grow in proportion to the rest of the body. Nélaton cites the case of a cicatrix, in an infant, reaching from the wrist to the elbow, which later in life covered the same distance.

Mr. Adams observes that the rate of growth, as demonstrated in these cases, did not appear to be sufficiently known to the surgeons, or considered by them when performing operations on children in exposed portions of the body, the opinion being that scars remain stationary or wear out. It is true that the scars of some slight wounds do wear out to a certain extent, but after deep wounds, and when a portion of the skin has been destroyed, the cicatrix appears to be persistent through life, and to grow *pari passu* with the rest of the body, or rather with the portion of the body on which it may be placed. Vaccination scars are, undoubtedly, often much enlarged by growth.

According to Panas, locomotion of scars may take place. A small scar near the eyelid in infancy rose gradually with increase in years, until it was situated close to the roots of the hair.

The so-called false scars or striæ seen in the skin after pregnancy are due, according to Winiwarter, to a displacement of the elastic fibres. Instead of the thick bundles ordinarily seen, there is a coarse meshwork.

The most striking peculiarity of scar tissue is its tendency to contract. This contractile power exerts its influence during the healing process in a beneficial way, distant margins of wounds being brought nearer together, and the covering of the defect by epidermis being greatly facilitated. It is also the cause of the most striking deformities which disease can produce. So irresistible is its power that everything yields before it. Tendons are bound down into hopeless inactivity ; nerves are held with an iron grip ; the breasts may be so distorted that lactation becomes impossible ; limbs are rendered useless ; the trunk is bent upon the extremities ; and even the solid bone is moulded into fantastic shapes.

What is this hidden power ? What peculiar conditions of tissue exist which endow it with such precocious qualities ?

Delpech has suggested that the contraction of scar tissue was due to a condition which allied it to muscular tissue. According to Panas, we must regard cicatricial tissue as a provisional growth which is intended to preserve union until the edges of the normal skin have been regenerated. The absorption of this transitory structure is the final stage of the healing process. If the normal tissues are not reproduced only one act in this process is accomplished, and it is this attempt at absorption which brings about the great condensation of the scar tissue.

Looked at from this point of view, we see why it is that hypertrophied cicatrices are produced when the edges of the wound retract from some cause or other. The abundant formation of new tissue is an exaggerated effort on the part of nature to supply the necessary covering for the part. If the cicatricial tissue possessed any specific contractile qualities, we should find a subsequent approximation of the edges of the wound, which is not the case. A broad, flat scar is usually the eventual outcome of such conditions. And we find this tissue so yielding to steady pressure that in wounds of the abdominal wall, when accurate adjustment of the edges of the wound has not been effected, the intervening scar tissue yields, and a hernia results.

It is only when there is an extensive loss of substance that the effects of contraction become perceptible. Moreover, this shrinkage begins even before the cicatricial tissue is developed, for we see the approximation of the edges of a large defect during the process of granulation. Contraction is here evidently due to absorption. The contractile power of a scar is, according to Robert Jones, largely dependent upon the amount of granulation tissue which becomes organized; all in excess of local demand adds to its contractile power.

Regarded from a physiological standpoint, scars may be divided into three classes, viz., hypertrophied scars, or those due to an excessive formation of cicatricial tissue; contracted scars, or those due to an attempt at absorption of larger cicatricial surfaces; and, finally, the normal scar, which represents the more or less imperceptible tissue which forms the line of union of the well-adjusted edges of a wound.

Scars ordinarily are not painful, for, as we have already seen, nerves are not usually found in them. Scars may, however, become a source of pain by their adherence to structures which are sensitive, as bone or nerve trunks and fibres. Some observers, as we have seen, have found nerve filaments in the scar tissue, and Follin speaks of neuromatous enlargement of nerves in scars.

Weir Mitchell* speaks of cicatrix pressure on nerves as unusual, and mentions, as one of two cases which came under his observation, the presence of a cicatrix close to the sciatic nerve, so that whenever the leg was straightened the man suddenly lost power and suffered pain. Pressure may also be brought about by contractions, which leave the limb in an abnormal position. During the war numberless examples of painful scars, caused by gunshot wounds, came into the hospitals for relief. It was in a case of this kind that I first saw morphine injected subcutaneously by the late Dr. J. Mason Warren. Mitchell refers to superficial shell wounds causing painful cicatrices due to compression of sensitive cutaneous nerves.

*Injuries of Nerves. 1872.

He was unable to find any accounts of the microscopical examination of painful scars, but is inclined to believe that some such alteration exists in the nerves as that described by Danielson and Broeck as occurring in anesthetic leprosy. The early symptoms seemed to be referred to simple congestion of the neurilemma ; the succeeding and latest phenomena are due to a hyperplasia of the connective tissues within and without the nerve sheath.

Among the most common of the pathological changes observed in scars is that hypertrophic condition known as keloid (*chele*, a claw).

There is a general tendency among writers at the present time to disregard the distinction between true and false keloid.

True keloid has been considered by most observers as a spontaneous new formation in the corium independent of any pre-existing wound ; but there is a growing feeling of late years that keloid tumors spring from cicatrices more frequently than has been supposed, and that some cases of supposed true or spontaneous keloid in reality sprang from minute scars caused by pressure of clothing or friction of folds of skin. Kaposi recognizes both true and false keloid, and also a third variety, which he calls hypertrophied cicatrix. The latter form I have already described as a variety of scar. In addition to these forms, a verrucose cicatricial tumor is described by Hawkins, and syphilitic keloid is mentioned by several writers.

The typical true keloid, like that described first by Alibert, is situated over the sternum, and is composed of newly-formed tissue of firm and elastic consistence, sharply defined, and raised 2 to 4 mm. above the level of the skin. It extends transversely across the median line of the chest, and terminates at either end in one or more prolongations, which give it its characteristic appearance and name. Its surface is smooth and shiny, and the color red, like that of a scar, in the single specimen which I have seen during life. It is, however, said at times to be white, pinkish, or even purple. It grows to a certain point, and then remains stationary. There is little or no tendency to ulceration. There is usually no history of a pre-existing scar, and the growth, to all appearances, has developed spontaneously. Keloid is described by different authors as growing in almost any region of the body, but the pure type, such as I have described, is found on the chest ; and as it is an extremely rare form of growth, and is highly characteristic in its appearance, it seems to me deserving of a separate classification from other forms of keloid, in spite of the possibility that it may have developed from some lesion that may have passed unnoticed. According to Hebra, it is found once in two thousand cases of skin disease. True keloid rarely disappears. I do not find any well-authenticated reports of the spontaneous disappearance of such a tumor.

It is not painful, but may give rise to an itching, prickling sensation, and it is for this reason principally that patients are said to seek relief.

False keloid may develop in almost any part of the body. There appears to be a tendency in scars situated on the chest to form keloid tumors more frequently than elsewhere. Why this is the case is not apparent, but in this region hypertrophies of scars seem to be more frequent than elsewhere. False keloid is also found in the face, both surfaces of the extremities, back of the hand and foot, and external genitals. (Crocker). It is found after puncture of the ears, and sometimes develops from leech bites. It is also well known to spring from the scars of acne pustules, and in this case is often multiple. Hutchinson gives a portrait of such a case where, in addition to numerous tumors in the back, there is a growth over the sternum strongly resembling true keloid, which suggested to him the possibility of the development of the latter variety from acne pustules, so frequent in this locality, which have been overlooked. They are said to be found rarely in the mucous membrane. Verneuil reports a case of keloid of the conjunctiva.

True keloid appears to be a disease of adult life, but false keloid may appear at any age. There seems to be a keloid disposition in certain families and individuals, and the peculiarity of the African race in this respect is, of course, well recognized in this country. False keloid grows to a certain point and remains stationary for many years, and finally flattens somewhat, and becomes paler. It may grow at times to an unusual size.

This statement of the minute anatomy of keloid agrees essentially with that made by Langhans, Kaposi, Crocker, Plicque, and others.

The development of keloid probably takes place in the following way: A growth of cells first occurs in the adventitia of the arterioles; these later become fusiform cells, and finally fibres. As bundles of fibres form in this way around the arteries, the tissue of the corium is gradually compressed by them, and the different bundles thus uniting form the keloid growth.

Keloid is a fibrous tumor, which, in consequence of its development of the vessels, is composed of bundles of fibres running parallel with them in contrast to a simple cicatrix, which consists of fibres which form a network. The tendency to recurrence is evidently due to the implication of the walls of the blood vessels for some distance beyond the borders of the tumor.

The origin of such a growth from the walls of the smaller arteries, and the presence of many fusiform cells, suggests the possibility of the existence of muscular tissue at some period in the existence of these growths. We have examples elsewhere of fibro-myomata, and it is precisely in those

racies most liable to uterine fibroids that keloid is most frequently found. One authority, as we have already seen, has sought to explain in this way the great contractile power of this form of growth. A more careful study of the origin of keloid might develop the fact that the media of the artery is also involved in the pathological change, and that a growth of myomatous tissue actually does take place.

Cancer has been associated with cicatrices by writers ever since Alibert described keloid, and pointed out the close affinity which the disease, which he first called *cancroids*, was supposed to bear to epithelioma.

It appears usually long after the scar was originally acquired, and it is seen most frequently in individuals from forty-five to fifty years of age.

Rudolph Volkmann* has collected 128 cases of cancer developing from scars, ulcers, or fistulæ of the extremities: of these the greater portion formed in scars, particularly those which had a tendency to break down and ulcerate, or in wounds which for some reason had not entirely healed. As this is the history of most ulcers of the lower extremities, it is not surprising to find that cancer occurred ninety-five times in the lower extremity, and only thirty-two times in the upper extremity; in other words, the disease is nearly three times as frequent in the lower extremity.

Cancer of the lower extremity developing in ulcers is of a mild type, usually resembling more closely the so-called epithelioma than any other form of carcinoma. Some of them have large epithelial cells and belong to the polymorphous type of epithelioma, while others resemble closely the pure rodent ulcer, or small cell epithelioma, containing chiefly cells such as are found in the deep layers of the rete mucosum.† It is on this account that glandular involvement in these cases is comparatively rare. In the 128 cases quoted by Volkmann, only twelve were known to have died of cancer. Sixteen of these died of other diseases, and in fifty-five cases the subsequent history could not be obtained.

Many of the so-called keloid tumors of unusual size are undoubtedly sarcomatous in nature, and Virchow, as we have seen, attributes the recurrence of such growths to their malignant character.

The cause of the suppurative inflammation may be due either to reinfection of the cicatrix, or to the awakening of spores which have long been dormant. The most common form of relapse is due to tuberculosis. An unfavorable state of the health or a severe local strain are usually the exciting causes.

Cicatrices may reopen, owing to the presence of foreign substances within them.

The use of silk ligatures and buried sutures is now a well-recognized

*Klinische Vorträge, February, 1880.

†Warren, Rodent Ulcer, 1872.

source of the formation of obstinate sinuses. This is true, however, of certain localities only. How often do we hear of silk ligatures used in an amputation of the breast after the wound has once healed?

On the other hand, operations in the abdominal walls or cavity are often followed by the development of stitch sinus, even though the wound has healed in the most approved aseptic manner. The size of the ligature used in pedicles accounts partly for this difference, but the principal cause is the strain brought to bear upon the cicatrix. The formation of minute stitch abscesses and sinuses in operations for the radical cure of hernia and the shortening of the sound ligaments are familiar examples of this type. Even though the buried suture be thoroughly aseptic, the subsequent strain brought to bear upon the tissues paves the way for a secondary infection.

Cicatricial tissue does not appear to suffer any senile changes, which in other tissues has been quaintly characterized by Hutchinson as "Tissue dotage." Beyond the distinctly diminished resisting power to carcinoma, there appears to be no degenerative process clearly due to age. In fact, the scar tissue may be said to have grown old prematurely, and, therefore, is susceptible to no further change with advancing years.

Treatment of scars. Every effort should be made to favor as minute a development of scar tissue as possible. The careful adjustment of the edges of a wound is too well recognized an axiom to need repetition here. If buried sutures are to be used, I should strongly advise the use of an animal suture rather than silk, owing to the tendency of the latter substance to work its way sooner or later to the surface at some point. Any one who has studied under the microscope the healing of wounds cannot fail to recognize the great irregularity of the edges of the wound and the tendency of the epidermis of one lip to bury itself uselessly into the deeper tissues. An unnecessary amount of granulation tissue is formed in such cases, and furnishes material for an hypertrophied cicatrix (a new formation between the edges of the wound). Very superficial stitches should be used more freely than in my experience is customary with surgeons. Packard recommends the making of very oblique superficial incisions, which in his experience leave an imperceptible cicatrix.

The popular idea that the flesh of certain people heals quickly is not a fanciful one, but is based upon an unusual power of regeneration in the skin which they possess.

When there is a large open wound on the face, the skin forming the edges of the wound pushes forward until the exuberant granulations are reached. From this point a thin layer of epithelial cells grows over the granulation tissue and forms a scar which remains as a permanent disfigurement. This stage of the healing process should, according to Lassar,

be prevented, and for this purpose the dressing should be removed every few days and the thin layer of epithelium should be scraped off. The borders of the skin may be refreshed by a knife or a sharp spoon. In this way the normal epidermis and corium will have an opportunity to cover in a much greater surface of the wound, and the cicatrix will often be reduced to an almost imperceptible size. Volkmann has called attention to the fact that those parts of the face in which the skin contains large hair follicles and sebaceous glands have an unusual power of regeneration, as these structures are storehouses of epithelium from which a mass of epidermis is formed which springs up through the granulation tissue and is surrounded by the superficial growth, giving to the newly-formed skin both the functions and appearance of an almost normal structure. It is perhaps due to the greater regeneration of the skin of the face that scars in this region are less liable to stretch.

Robert Jones has also dwelt upon the importance of a systematic checking of the superabundant growth of granulations, as the contractility of cicatrices is largely dependent upon the amount of granulation tissue which becomes organized. He advises that the granulation should be frequently scraped and burned, while the limb (in case the scar is there) should be kept extended. Plastic operations should not be performed for the relief of contractions until the old cicatrices have been stretched. The healthy skin is stretched at the same time, and the contractile element in the scar tissue is destroyed by continued extension. It is this yielding of cicatricial tissue which favors hernia in abdominal scars.

It is important to remember that the skin, and, indeed, other tissue, as muscular fibre or aponeurosis, are capable of regeneration, and that by approximation we favor this process and avoid, as much as possible, the substitution of the less highly-organized cicatricial tissue. I do not believe it to be a good substitute for other tissue in the radical cure of hernia. "Scar tissue is unreliable, and should be avoided," ought to become an axiom of modern surgery.

For projecting scars compression has been recommended by various authors. Panas* quotes the case of an actress who had scars on her face from smallpox. She wore for the space of six months a mask both day and night. The skin, at the end of the treatment, presented to the feel a polished surface; but when pinched up, points of induration could be felt in it. Compression will often remove the redness as well as the elevation of a scar. The earlier it is done the better. It should be continued for some time after the nodule has disappeared. It must be used at first all night; later on in the treatment, compression for a few hours at a time

*Paris, 1863.

will be sufficient. For old scars he advises excision; slight scars can often be removed by actual cautery.

Unna* recommends for the treatment of depressed scars of the face friction with sand to prevent the undue accumulation of the horny layer of the epidermis. A case of scars produced by pustular acne was treated successfully in this way. After a few months of this treatment it was found that the depressed scars on the nose were shallower and smaller in diameter, and were scarcely perceptible. In a case of smallpox scarring, in a woman twenty years of age, three months of the friction treatment made the skin smooth. The situation of the previous depressions was marked by less pigmented circular spots.

Unna employs finely powdered marble. He prepares a "pulvis cutifricius" of two kinds. The powder may be used alone or mixed with powdered soap, sulphur, or other powders. It should be applied as a lather. The action of the carbonate of lime has probably some beneficial effect. A fine sponge is dipped in the powder and the diseased parts are polished with it, at first slowly, later more rapidly but lightly, more as one would polish a boot. The frictions should be employed for ten to fifteen minutes once or twice a day.

Depressed cicatrices from gunshot injury, disease of the bone or of the glandular structure of the neck, are often the cause of considerable deformity. An operation for their relief has been planned and successfully carried out by William Adams.* This consists in the subcutaneous division of the scar with a fine tenotomy knife. Two or three punctures may be necessary to liberate extensive scars. The cicatrix should then be carefully everted, and while held in that position two hair-lip pins or finer needles are passed through its base at right angles to one another so as to maintain the cicatrix in its everted or raised form for three days. Adams reports several cases in which the depression had not reappeared several years after the operation.

Pigmentation of the cicatrix may be due to various causes. That produced by the presence of particles of powder is most conspicuous. These cases should be taken as soon after the injury as possible, and the skin should be scrubbed with a nail brush while the patient is under ether. A number of cases have been most successfully treated in this way by C. B. Porter. In older scars the particles of powder can be removed without further deformity by the punch devised by S. J. Mixer for that purpose.

Unpigmented scars are said by Pashkis to be improved by tattooing with a skin-colored mixture made with sulphate of baryta, yellow ochre, and water.

*Unna, *Vierteljahr, fur Derm. and Syph.*, Vol. VIII., p. 503.

*London, J. and A. Churchill, 1879.

The treatment of true keloid is most discouraging, owing to the persistency with which it returns. The patient usually seeks relief from pain and itching rather than from the deformity. Kaposi recommends the use of mercurial ointment alone, or in combination with iodine and glycerine. Quinine and arsenic may be given internally.

Plicque recommends scarification for the relief of pain. The incisions should be made about 1 cm. apart, and should cut through the whole thickness of the tumor.

If excision is attempted, the line of the incision should run from 1 to 2 cm. beyond the limits of the disease, and should extend through the cellular tissue to the muscular aponeurosis.

In certain regions it is possible to remove the growth with an ample margin of healthy tissue, as in the lobes of the ears. In such cases recurrence rarely takes place.

Compression is recommended by many writers for the cure of false keloid. Unna treated in this way a cicatricial keloid, the result of a burn. A soft mercurial ointment was first applied, and held with circular strips of adhesive plaster. Outside of this dressing collodion was used freely. The dressing was renewed at the end of a week. The keloid gradually disappeared after treatment during two and one-half months.

Iodide of lead ointment was occasionally used instead of the mercurial ointment. A mixture of four parts of acetate of lead with twenty parts of collodion is applied with a brush, and after a few days' treatment the keloid is said to shrink, become paler, and cease to pain. The frequency of the application should be gradually diminished.

Compression has been employed by Verneuil by means of an elastic bandage. Vidal has produced great improvement, and even disappearance of the tumor, by deep linear incisions dividing the vessels thoroughly.

TREATMENT OF SURGICAL TUBERCULOSIS.

Dr. Jeannel, of Toulouse, (*Semaine Médicale*) recommends the following treatment: After the tuberculous area has been laid bare and the neighboring parts covered with cold compresses, a tampon soaked in seething salt water (of a temperature of 108-110° C.) is introduced into the focus, and all its diverticula thoroughly exposed by friction to the action of the boiling water. This procedure is repeated with a second tampon, and, after it has been carried out for five or six times, it may be assumed that all the diseased tissues have been destroyed, as it is known that tubercle bacilli cannot resist a temperature of 100° C. Jeannel has successively treated several cases of suppurative local tuberculosis by this method, in some of which there were numerous fistula.—*International Journal of Surgery*.

Progress of Medicine.

MEDICINE

IN CHARGE OF

W. P. CAVEN, M.B. Tor.,

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

STRIÆ FORMED IN THE SKIN AFTER INTESTINAL AFFECTIONS.

Dr. Kirstein presented a patient, eighteen years of age, who had always been in good health until an attack of lung trouble, which lasted for two years; then in October fell severely ill with typhlitis, which confined him to bed for six weeks. About Christmas he had a relapse of typhlitis, which lasted six days. In January noticed formication and dragging sensations in the shoulder, and then observed the presence of some peculiar marks very similar to those seen on the abdomen of women after delivery. These striæ were situated at the level of the tenth dorsal vertebra, their direction perpendicular to the axis of the body, and were almost confined to the left side, only a few prolongations passing over to the right. The skin was depressed in these striæ, and small ridges branched out perpendicularly to their direction. The patient remained weak and depressed for the effects of the perityphlitis.

With respect to the origin of these striæ, although in this case there was no mechanical cause of great moment, one cannot help thinking of some divulsion of the skin or of some atrophic process. In literature we meet with many such cases, and always with a history of a grave intestinal affection or some disease of the abdomen. Senator observed an analogous case in a soldier twenty-four years of age, who in 1870 had suffered from an acute attack of dysentery, and for many years had sanguinolent dejections. In 1877 suffered from a severe shoulder pain, and noticed the cutaneous striæ as in this case.—*La Cronica Médica*. R.B.N.

MONEY (A.) ON A NOTE ON THE DIAGNOSIS OF TUBERCULAR MENINGITIS.

Every text-book of medicine refers prominently to the difficulty of diagnosing some cases of tubercular meningitis, but little attention has been drawn to the value of the reflexes. In cases of doubt I believe an appeal to the condition of the reflex actions during the course of the disease will sometimes prove of signal service in the diagnosis. The

reflexes are altered in cases of simple inflammatory fever and enteric fever, but the alterations are fairly definite; the knee-jerks are increased, and an ankle clonus may be obtained. The superficial reflexes are also increased. The deep reflexes in the arms are apt to be developed or exaggerated if normally present. These changes are usually symmetrical on the two sides of the body. The knee-jerks are never lost in uncomplicated cases of inflammatory or continued fever whilst the pyrexia lasts.

In meningitis an increase in the activity of the reflexes may be present, and frequently it is found that there is a loss or diminution of some of them. In a doubtful case, in which the diagnosis rests between tubercular meningitis and typhoid fever, the absence of the knee-jerk tells in favor of the former; and this absence is very strong evidence of tubercular meningitis if the knee-jerk on the other side is exaggerated, or if there is ankle clonus on the same or the other side. I have notes of many cases of tubercular meningitis in which this unusual combination of lost knee-jerk, with fairly marked ankle clonus, obtained. I have never met this combination in a case of enteric fever.

In two other cases of tubercular meningitis, completed by an autopsy, the superficial and deep reflexes on one side of the body have been totally lost, whilst those on the other side were decidedly exaggerated. In an infant aged fifteen months the side on which the reflexes were exaggerated subsequently became hemiplegic. This was also the case in a girl aged two and a half, which I saw with Dr. Dagnall Clark, but there was no autopsy. In a case of hemiplegia in an infant aged ten months, reported in the "Clinical Society's Transactions" in 1884, a vascular lesion was found, thrombosis of a branch of the middle cerebral artery complicating the signs of tubercular meningitis.

The case reported by Dr. Shewen in *The Australasian Medical Gazette* for January presented an insensibility of the right side of the body, followed by hemiplegia, the knee-jerk being absent, but a distinct ankle clonus present. It will be noted that in the case referred to above the hemiplegia supervened on that side on which there was a greater sensibility. One observed that raising the left eyelid for ophthalmoscopic examination caused the child to wake up and show resentment, whereas the right eyelid could be raised and the eye examined without any notice being taken of the procedure by the patient.—*Australas. Med. Gaz.*, June, 1893.

EMPHYEMA AND ITS PROPER SURGICAL TREATMENT.

Dr. Carl Beck, of New York city, at the Pan-American Congress, read a paper on the above subject. The essential question in this paper was which of the three methods of treatment used—aspiration, incision, or resection—gave the best result. From his personal experience, together

with statistics collected, it proves resection the method of treatment for obtaining the best recovery. Resection, he found, was gaining ground daily among surgeons. Some surgeons have been in the habit of making an incision first and then use drainage for a time; and, if no good results are obtained, follow it up with resection, which only causes unnecessary delay, and in many cases makes the prognosis bad. The prognosis of any case depends entirely upon the early diagnosis made by the practitioner and the method of treatment adopted by him. In using a hypodermatic needle for diagnostic purposes, sometimes the pus will be too thick to flow through the needle; and in case it fails to appear, if you will unscrew the syringe, leaving the needle inserted, and then push a wire through, upon withdrawing the wire you will find the end covered with pus.

Aspiration. Absorption can only take place under the most exceptionally favorable circumstances; therefore in the large majority of cases treatment by aspiration alone only drags the case along until the patient's vitality sinks too low for resection to save him, and it is from just such cases as these that the opponents of resection gather their statistics.

Incision. This method of treatment will permit of drainage, but there are always adhering lumps to be found upon the surface of the pleura which no amount of drainage or washing can remove. They must be picked off with the finger.

Resection. This is by far the best of all methods. We are then enabled to sweep the finger around inside, opening up any pockets, and tear off all adhering lumps and thoroughly cleanse and drain the cavity. In making a resection, if the operator is careful to preserve the periosteum, the rib will grow again. After making a resection I do not immediately insert a drainage tube. If a tube is inserted at once, owing to the fact that the movements of respiration will cause the tube to irritate the surfaces, you will cause more or less hemorrhage. I usually wait three days before inserting it.

In conclusion, I will say that resection is safe, clean, and easy to perform, and gives by far the best results. I do not, however, approve of the method of resection recently recommended in Germany.—*N. Y. Med. Record.*

"ROSIN WEED."

In a recent number of the *New York Medical Record*, Dr. Beverley Robinson draws attention to the good effects of "rosin weed," *Silphium laciniatum*, in the treatment of dyspnea in pulmonary phthisis. He uses a tincture made according to the following formula:

R.—Fl. extr. silph. laciniatum (root)... f ʒi.

Alcoholis..... ʒiv.

Aquæ..... ʒii.

M. Filter. Sig.: ʒss.-ʒi. as a dose.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

THE BEST DRESSING OF THE UMBILICAL CORD.

LVOW (*Revue Médico-Chirurgicale des Maladies des Femmes*, May 25th, 1893), under the above title, holds that glycerin is the best dressing for the cord, because it is not only antiseptic, but also drying in its effect. He has used it in five hundred cases, and finds that it mummifies the cord and causes it to drop off in three to five days. The mode of procedure is as follows: After the cord has been ligated and cut, its visceral end is dried most carefully with absorbent cotton, and hermetically sealed by a thin layer of cotton moistened with pure glycerin. Over this are applied a few turns of a tarlatan bandage. This dressing is not changed until the cord comes away. During this period the child is not bathed; the cord is not even inspected, the external tarlatan bandage being changed only when it becomes soiled. The granulating surface left by the dropping off of the cord is perfectly healthy, non-inflammatory, and cicatrizes in from nine to ten days under a dressing of subnitrate of bismuth or talc.—*Therapeutic Gazette*.

LONG-CONTINUED HEMORRHAGE IN THE LATTER HALF OF PREGNANCY,
DUE TO DETACHMENT OF A NORMALLY-SITUATED PLACENTA,
AND ACCOMPANIED BY SEPTIC INTOXICATION, WITH
A REPORT OF TWO CASES.

Hirst (*Medical News*, July 22, 1893) reports two cases of hemorrhage from detachment of a normally-situated placenta, both occurring at about the sixth month, and evidencing the absorption of septic products from the slowly-decomposing clots which had formed between the layers of the decidua vera.

The first case had been bleeding profusely from the genital passage for two or three weeks. She was profoundly reduced from loss of blood, and had considerable fever. The child was still alive. Diagnosing premature detachment of the placenta, in view of the alarming condition of the woman, Hirst determined to terminate the pregnancy. The placenta was found to be attached at the fundus, with one-quarter of its maternal surface covered with blood-clot, dark in color and firm as liver in consistence. Clots extended along the membranes to and beyond their point of rup-

ture. The patient recovered, after exhibiting symptoms of septicemia for a time.

The second case had been bleeding for six weeks, despite careful rest in bed, with opium and viburnum during the last four weeks. She had a septic temperature during this time. Although the fetus was still alive, it was determined to terminate the pregnancy. The placenta was found attached at the fundus. About one-eighth of its surface was degenerated from previous separation. A long, decomposing clot was attached to this margin. The woman made a good recovery.

These are of especial interest, inasmuch as the text-books in common use do not describe this condition, and the general practitioner, unless he had seen and recognized such an accident, would be at a loss in handling his case. — *Univ. Med. Mag.*

DRY BIRTH.

Dr. George D. Weston, in *University Medical Magazine*, reports an interesting case:

Mrs. A., primipara, expected confinement March 10th. On Feb. 14th lost a large amount of water, which so frightened her that she fainted; water continued to pass for some hours; os undilated. Labor commenced March 9th, progress slow; after some hours patient etherized and delivery accomplished. Right hand was applied to the right cheek, so that labor was retarded by the position as well as by the dry birth. The special point of interest is the rupture of a bag of water three weeks before term. There was no liquor amnii at the time of delivery, and the vernix caseosa was dry.

INDUCTION OF LABOR BY CHAMPETIER DE RIBE'S BAG.

Dr. Heelas, late house physician, General Lying-in Hospital, Lambeth, London, reports (*London Lancet*) twelve cases of induction of labor by the use of this bag. The patients treated were under the care of Drs. Herman and Cullingworth. As a rule, there was not much difficulty in introducing the bag; though occasionally, especially in primipara, it was necessary to procure a preliminary dilatation of the os by bougie tent or Barnes' bag. In nervous patients it was found an advantage to have them placed under an anesthetic and on their backs. Generally, when the bag was in position there was no further trouble until it was expelled, when the os was found to be fully dilated. The objection raised that it not infrequently displaces the head in vertex presentations does not appear to be a very serious one, because in certain cases a displaced head can be easily replaced by external manipulations, while in other cases the displacement is only a step towards what is desired, namely, turning.

In eight cases there was contracted pelvis ; in one, uterine fibroids ; in one, an inflammatory swelling around the uterus ; in one, accidental hemorrhage ; in one, premature rupture of the membranes. In two cases a vertex presentation was converted into a breech ; in two others the head was displaced towards an iliac fossa. In every case delivery was completed within twelve hours of the introduction of the bag.

In the February number of *THE PRACTITIONER* we gave an abstract of an interesting discussion on this subject at last year's meeting of the British Medical Association. Dr. Barnes was inclined to sneer at the new bag on account of its shape, which he had discarded many years before while experimenting with dilating bags because it was faulty. Certain accouchers of New York have also objected to it on account of the tendency to displace the presenting head. It has been used, however, quite extensively on the continent and in Great Britain during the last two years, and the results in the hands of most have been very satisfactory. We believe that when once placed in position it completes the dilatation of the os more safely and more quickly than any other instrument which has yet been devised.

THE LIFE AND DEATH OF A UTERINE FIBROID.

Kleinwachter (*Archives of Gynecology, Obstetrics, and Pediatrics*) gives a report of one hundred cases of uterine fibromyomata which he has watched for many years. We learn from the *International Medical Magazine*, which gives an abstract of the report, that the author thinks there is no fixed rule for calculating the age of a fibroid from its size. A fibroid, as a rule, grows quickly from a little lump to a big tumor. Sudden increase of a fibroid already large is frequent ; a fibroid seldom remains stationary or diminishes before the menopause. The precise effect of ergot is difficult to determine. In pregnancy a fibroid increases, diminishes during involution after delivery, and may disappear altogether. The menopause has not nearly so beneficial an influence as is generally supposed ; the fibroids often continue to grow, and sometimes more quickly than before. At this time there is some risk of malignant degeneration of the tumor. There is no accurate explanation why some fibroids grow quickly and others slowly ; the rate of growth probably depends on the prevalence of the myomatous or the fibromatous element in the fibroid, a matter which cannot be elucidated by purely clinical research.

TRIPLETS.

Mr. Sidney Matthews, of Crawley, Sussex, England, reports triplets with three separate placentæ. On June 30th, a poor woman was confined at Crawley of triplets, two boys and a girl. Though remarkable in

itself, it seems to be further noticeable from the facts that all three were vertex presentations, and that each had an absolutely separate placenta, the births occurring: child, child, one placenta, child, second placenta, third placenta. The children are alive and the mother doing well.—*Brit. Med. Jour.*

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

ORCHIDOPEXY.

Dr. Jalaquier has performed this operation for testicular ectopy fifteen times in thirteen patients. Ten cases were unilateral, inguinal. Two bilateral cases were complicated with hydrocele or hernia. In all these cases there was communication with the peritoneal cavity. The most important point about these cases is the occlusion of the vaginal sheath, not the fixation of the testicle. His results were perfect in twelve patients. The cord always remained somewhat shortened, but the hernia had not been reproduced. The case that failed was in an epileptic child.

Dr. Felizet believed testicular ectopy was a complex lesion, and that clinically the defective position of the organ was of secondary importance. There are two great classes of ectopy, the mobile and the fixed. Each has its own therapeutic indications. When the testicle is movable it is ordinarily normal, and the external orifice of the inguinal ring is enlarged. When it is fixed the ectopic gland is valueless. It is painful at times, atrophied, and nearly always associated with a hernia, which does not favor the descent of the organ. In these cases the ectopy and the hernia require treatment, and operative interference is always indicated.—*La Cronica Médica.*

R.B.N.

CLASSIFICATION OF CANCEROUS DISEASES.

Dr. Herbert Snow (*Lancet*, July 29th, 1893), in a lecture recently delivered at the Cancer Hospital, defines "cancer" as "a large group of morbid conditions in which all elements normal to the body are found to multiply luxuriantly, and to prey upon the healthy tissues, eventually destroying the life of the individual. The cells or nuclei which have

undergone this profound modification appear to have now become independent organisms—parasites, or, rather, autosites. . . . There are strong reasons for regarding this peculiar change as one of reversionary character, of devolution instead of evolution; the cell elements of the particular tissue attacked reverting to a primitive, amebiform condition once universal throughout the germ.”

Dr. Snow, taking the tissue origin as a natural basis of classification, recognizes nine primary genera of cancer. “(1) Epithelioma, derived from epidermis, or from non-specialized epithelium; (2) carcinoma, from the specialized epithelioid cells of secreting glands; (3) sarcoma, from the fixed cell elements of the connective tissues; (4) lympho-carcinoma, from the lymphoid or adenoid tissues, especially from those which constitute the lymph glands; (5) cylindroma, from tubular gland follicles in the stomach and intestines; (6) rodent ulcer—the cancer of short hair follicles—from the cells of the outer root sheath; (7) endothelioma, or primary cancer of serous membranes, probably derived from the germinal endothelium of the stromata; (8) myosarcoma, from the nuclei of non-striated muscle; (9) blastoma (from *blastos*, germ), vestigial cancer derived from unobliterated fetal residue—a new group corresponding to the inclusion theory of Cohnheim.”

This classification, it will be observed, includes all the tumor formations which may merit the term “malignant.” It discards the generally accepted idea that the sarcomata are derived from embryonic tissue, and therefore form a sufficiently distinctive class to warrant their classification in a separate group.

A.P.

THE TREATMENT OF GANGLION.

Mr. H. Martyn Jordan (*Lancet*) reports success in treating twenty-five cases of simple ganglion by aspiration and subsequent injection of Marton's fluid (grs. 10 of iodine; grs. 30 of iodide of potassium; 1 oz. of glycerine). After injection of from *m*15 to 3ss. of this fluid pressure is applied, and the parts kept at rest by means of splints and bandages for five or six days. The method has also been adopted with like success in chronic bursitis.

A.P.

CURVED SKIN INCISIONS.

Mr. Peyton T. B. Beale advocates the use of curved incisions wherever possible. The following advantages are claimed:

(1) It heals more rapidly, and for these reasons: There is really only one edge of the wound, that belonging to the flap, that is movable, the other edge being still adherent to the subjacent tissue; moreover, the flap having been stitched to the neighboring skin or held well away from the

seat of operation, both edges of the wound are quite uninjured by the time the sutures are inserted.

(2) The resulting scar is smaller, though this is only of importance in certain parts, for the skin may be incised obliquely in making a curved incision, so that the epidermis on the edge of the flap is slightly in advance of the true skin.

(3) It fully exposes the part to be operated upon, assuming that the base of the flap is twice or three times its length, and gives the operator plenty of room in which to work.

(4) Suturing the edges is easier than in the case of a straight incision, especially if the skin be pricked in one or two situations exactly opposite to one another before the incision is made, and often the curved wound is adapted to the shape of the part better than a straight one.

(5) The resulting cicatrix is not over the seat of operation.

(6) Drainage is often most perfect by inserting a tube through an incision in the base or some part of the flap, thus giving no hindrance to the primary union of the incision and preventing any possible discharge from infecting the edges.

(7) Incision through inflamed or diseased skin may be avoided and yet the disease be easily reached.

(8) There need be no tension on the edges of the wound, as a flap of skin is, so to speak, loose, and if there is fear of tension a thick silk suture may be passed through the base or some part of the flap and out again, and then through the skin on the other side of the incision and there fixed, thus avoiding a long suture beneath either edge of the wound.

ON THE REAL NATURE OF DIPHTHERITIC PARALYSIS.

It is very important that we should entertain clear ideas as to the probable nature of the forms of paralysis which are often a sequel of diphtheria, and which constitute such a remarkable feature. We must not assume vaguely that they are any proof of blood-poisoning, far less that they necessarily denote a specific fever. In all probability they are purely local in origin, and are due to an ascending neuritis which starts from the nerve-endings in the affected mucous membrane. In this feature they are probably their analogues in a number of other diseases. Infective inflammations of skin and mucous membrane are liable always to result in the implication of the end-organs of the nervous system, and from them to travel upwards along the nerve-trunks. Beginning as an affection of sensory structures only, they may, on meeting, by ascent along a sensory nerve-trunk, with motor-trunks or nuclei, implicate the muscular system. This is exactly what we observe in the neuritis of leprosy. In this disease the

skin is invariably the part first affected. Its sensory structures are destroyed or greatly impaired by a chronic inflammatory action, and local numbness is the result. At this stage, however, another complication may occur, although it is very far from being invariable. The inflammation may travel upwards along the sensory filaments, and when these, in the case of mixed nerves, join with their motor companions, may by implication of the united trunk produce paralysis of definite groups of muscles. Examples of this are constantly seen in leprosy. It is, I think, exactly the same in diphtheria. Defects in sensation of the mucous membrane which has been involved are constantly present after severe attacks of the diphtheritic throat. When the membrane has cleared away, the patient will allow the pharynx to be touched without displaying any sign of irritability. In a large majority of cases this condition of partial anesthesia gradually passes off, and no further complications ensue. This is just what is observed in the majority of cases of leprosy erythema. In a few cases of diphtheria, however, the process referred to, of ascending neuritis, sets in, and the proof that it has done so is afforded by the implication of certain groups of muscles, or even by a general limb paralysis.

My own experience of post-diphtheritic muscular affections has been not inconsiderable in connection with affections of the eye. Next to paralysis of the pharyngeal muscles, and indeed in some cases when these latter have been but slightly or only for a short time affected, we have the implication of that part of the third nerve which is concerned in accommodation. The patients, who are apparently quite well, make their appearance at the ophthalmic hospitals or in our consulting rooms complaining that they are losing their sight, and have become unable to read. On examination, it is found that a convex spectacle-glass entirely restores the reading power, the defect being due simply to loss of accommodation. None of the other third nerve muscles, as a rule, suffer. There is almost always the history of the patient having been troubled by fluids escaping by the nose. I have seen some cases of this paralysis of accommodation after very slight attacks of diphtheria, and a few in cases of quinsy or pharyngeal abscess, where presumably no real diphtheritis has been present.*

In all cases the condition after a few weeks' duration passes off, and this, I think, quite irrespective of any special measures of treatment which may have been adopted; nor have I ever met with cases in which relapses have occurred. The more severe and extensive forms of paralysis

*Dr. Mansel Sympton, in his interesting account of diphtheria as he observed it in Dr. Gee's wards in St. Bartholomew's, has the following important observation, which fits well with the opinions I have expressed: "In epidemics, catarrhal diphtheria may occur wherein there is no formation of false membrane whatever. These cases may communicate diphtheria to others, and may be followed by paralysis."

are far less common than the mild ones, but they obey the same law as regards being transitory and recoverable, provided only that the patient can be kept alive.—*Jonathan Hutchinson, in Archives of Surgery.*

KRAUSE ON THE TRANSPLANTATION OF LARGE SKIN FLAPS WITHOUT
A PEDICLE.

James P. Warbasse, in an editorial appearing in the October number of the *Annals of Surgery*, says of this method of transplantation :

The chief thing is that the operation be done aseptically, and that the bleeding on the surface to be covered be completely checked by compression.

The surface upon which the transplantation is to be done must either be a fresh wound, such as remains after the extirpation of a lupus area or epithelioma, or it must be converted into one. In the latter case, after the wound or ulcer has been cleaned, the limb should be rendered artificially anemic, and the whole region about the field of operation disinfected, and the granulations vigorously scraped away with a sharp spoon. The whole field should then be washed with sublimate solution, and this washed away with salt solution. After this the wound is thoroughly dried with sterilized gauze. The instruments and hands must also be dry. In every case of granulating wound, the ground of the defect should be removed with the knife. The dense fibrous tissue which underlies an old ulcer or granulating surface of long standing should be excised down to fairly normal tissue. It is of no consequence if an excavation results, for, as is known from experience with Thiersch grafting, these hollows soon become lifted up to a level with the surrounding skin. The same procedure is followed in chronic ulcers of the leg. If the underlying tibia is thickened, it can be chiselled off level. As a dressing, Krause uses sterile gauze, firmly bandaged over the wound. After the dressing has been applied the tourniquet is removed from the limb.

The surface from which the skin is to be taken should be disinfected. This must not be done too vigorously. Krause advises against strong scrubbing with brushes. The sublimate solution should be washed away with salt solution, and the skin thoroughly dried with sterile gauze. The skin should be cut away with the greatest aseptic precautions, and only dry hands and dry instruments employed. The skin of the inner and front sides of the arms and the front of the thighs, and also from the rump, can be used. In order that the defect can be closed immediately by suture, it is well to remove an oval or spindle-shaped piece.

In order to quickly separate the skin from the subcutaneous fat, the whole flap should be cut about with the knife, and then the lower angle of

this spindle-form area lifted up with toothed forceps, and with the knife held almost at a right angle to the under skin surface the flap is cut away. When a sufficiently large piece has been cut, in order to avoid any unnecessary manipulating of the wound surface of the flap, it should be folded against the wound surface, and thus held between the fingers. Such detail as this insures a better result.

The delicate connective tissue layer between the skin and the subcutaneous fat comes away with the flap. When here and there a little fat remains attached to the skin, it does no harm.

The skin patch, which contracts to two-thirds, or less, of its original size, should be placed immediately upon the wound surface, all bleeding from which has in the meantime been checked by compression, or the occasional twisting of a vessel. Ligatures should never be applied, as they act as foreign bodies, and prevent the flap from coming in contact with the surface from which it must receive its nourishment by diffusion. By applying pressure to the flap for a short time it becomes cemented to the floor by a thin layer of coagulum, which holds it when the pressure is removed.

It is never necessary, in the limbs, Krause thinks, to suture the flap to the surrounding tissue. He has used the suture only in one operation, on the upper lip. When possible, the whole defect should be covered with the transplanted patch. The dressing should be applied so that a 5 per cent. sterilized iodoform gauze bandage be bound about the wound, in order to hold the flap firmly in place. Over this should be placed a moderately firm dressing, and the limb immobilized by a splint.

The first change of dressing should be done, according to Krause, on the third or fourth day, because vesicles often form and should be opened. In order to prevent the slightest disturbing of the graft, at first only the outer dressings should be removed. The whole limb should then be immersed in boracic solution for an hour or more, until the dressings are soaked loose. On reapplying the dressings a piece of iodoform gauze thickly covered with boro-vaseline should be placed over the graft. The same care should be employed at all subsequent dressings.

Krause has observed that these skin grafts do equally well when planted on muscle, fascia, connective tissue, periosteum, dura mater, or directly on a denuded, cortical, or cancellous bone surface.

Inasmuch as skin from any part can be transplanted by this method, defects in hairy surfaces can be corrected by the transplantation of hair-producing skin.

After the wound has healed the new skin becomes movable, and microscopic observation after twenty-two days has demonstrated a thin layer of newly-formed subcutaneous fat.

PEDIATRICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital
for Sick Children; Clinical Lecturer on Diseases of Children
in the Woman's Medical College.

OBSERVATIONS ON ISOLATED CASES OF DIPHTHERIA.

In a paper read before the June meeting of the American Medical Association, Dr. W. A. Dixon, in discussing the probable modes of origin of isolated cases of diphtheria, says :

Diphtheria is a frequent and most destructive disease. The rich and the poor alike suffer severely from it. Sanitary conditions seem to have little to do with its prevalence. It has always displayed a marked tendency to prevail in sparsely populated districts rather than in centres of population. In this country it occurs as often on the hilltop as in the crowded city tenement houses. Observations go to show that country districts suffer more than populous cities. Pathological societies are replete with statistics showing its relation and communicability from the lower animals to man. In this country Dr. A. Jacobi says that probably the possibility of contracting diphtheria directly from animals is very much greater than the danger from water or milk.

Dr. J. Lewis Smith says that observations are accumulating which show that diphtheria, or a disease closely resembling it, occurs among animals. Since such distinguished observers admit that diphtheria may be contracted from the lower animals, I am encouraged to hold from my own observations that the isolated cases in the country or city may be accounted for in this way.

I will cite a few cases of isolated diphtheria to show that it is reasonable to conclude that children have been infected from birds, fowls, pigeons, and cats. In 1865 diphtheria prevailed as an epidemic in Southern Ohio, was malignant in character, and very fatal in its ravages. Preceding and at this period there was great fatality among the hogs and chickens in that region. In the family of Mr. G. the children were seized with violent symptoms of diphtheria. The chickens were dying with a disease affecting the throat. Some of them were brought into the house, where most of them died. The children spent most of their time with the sick chickens.

Another case was a child whose home was perfectly isolated. There was no possible chance of other infection. The child had a pet cat which it nursed continually, which had been ill some days prior to the child's attack, and had a discharge from the nostrils. Many more similar cases which have occurred in my practice might be cited. In quite every year from that time forward I have noticed instances of diphtheria in isolated homes where malignant sickness occurred among the animals. Recently my convictions have been so strong in favor of this animal infection theory that I inquire and examine into the condition of the animals belonging to the place.

OPERATION FOR UMBILICAL HERNIA ON THE NEWBORN CHILD.

Berger (*Nouvelles Arch. d'Obstét. et de Gynéc.*, June 25th, 1893) successfully operated on a female child thirty hours after birth, and exhibited it afterwards at a meeting of the Obstetrical and Gynecological Society of Paris. The infant was born strong, breathing well. The umbilical hernia was of the size of a small hen's egg, and covered by the membranes of the cord. There was a distinct neck or pedicle as thick as a man's forefinger, and made up of integument alone, which was united to the membranes by a deep groove. The lower part of the hernia was reducible, and the sac was there transparent. Coils of small intestine showed through it; they could all be pushed back into the abdomen. The upper part was irreducible, and in close relation with the vessels of the cord. After birth the hernia and abdomen were well washed and dressed with iodoform. On the next day the hernial sac was opened, and the small intestine reduced. The irreducible portion consisted of the cecum, the appendix, and about one-third of the large intestine, all intimately adherent to the membranes of the cord. A layer of these membranes had to be detached and reduced, together with the bowel. This manœuvre could not be done until a free incision had been made along the median line, as in abdominal section. The sac was excised. The peritoneum, the aponeurosis, and the skin were separately sutured. The operation lasted an hour and a quarter. The sutures were removed on the tenth day; recovery was complete at the end of a fortnight. Guéniot, in the discussion on Berger's case, referred to Lindfors' invaluable monograph "On Umbilical Hernia" which appeared last January in Volkmann's *Vortrage*. He said that, as in adults, very minute particulars of each case of this operation in infants would be needed. Nothing differed so much as two umbilical herniæ. Other abdominal viscera besides the intestine may lie in the sac, inseparably adherent, and the abdominal cavity may, by congenital defect, be much too small to hold all the herniated structures.

ACUTE NEPHRITIS AFTER VARICELLA.

Cassel (*Deut. Med. Woch.*, August 10th, 1893) first refers to the rarity of this complication. Although carefully looked for in over two hundred of his own cases, it was only present in the following instance: A girl, aged four, with no history of previous infective disease, went through an ordinary attack of varicella. About the twelfth to fifteenth day, the symptoms of acute hemorrhagic nephritis appeared. When she was seen, the face was swollen and the urine of a dark-red appearance, containing much albumen and blood. The digestive functions were disturbed, and constipation present. Temperature 39°C . Other organs were healthy. The symptoms of nephritis remained at their height for about six days, and then disappeared relatively rapidly in the next twelve days. The child recovered completely. There was no evidence whatever to lead the author even to suspect that it was an acute exacerbation of chronic nephritis. Among the twenty-five published cases, there have been all degrees of severity. The nephritis occurred from the fifth to the twenty-first day of the varicella, and lasted twelve to twenty-four days. Three fatal cases have been observed, and here the morbid anatomy resembled that of scarlatinal nephritis. As regards prophylaxis, children should remain in bed for a few days, even in the slightest cases, and should keep to the room for a week.—*Epitome British Medical Journal*.

PRELIMINARY REPORT ON THE CAUSES OF CHLOROSIS.

In the *Brit. Med. Jour.* for Sept. 23rd, 1893, Dr. E. Lloyd Jones gives the results of his investigations into the causation of chlorosis. Until the age of about 15 the specific gravity of the blood is about the same for both sexes; after that, however, the specific gravity in the female falls, while it rises in the male. In the healthy female there is a marked fall between the ages of 16 and 22.

Typical cases of chlorosis all occur between the ages of 14 and 26. In these cases so great is the fall that in sixteen out of eighty-seven cases of chlorosis the specific gravity of the blood was below 1037. There is no other common condition in which the specific gravity of the blood undergoes such profound change, and this is almost entirely due to a reduction in the amount of hemoglobin. That the reduction was owing to a falling off in the hemoglobin was demonstrated by taking the specific gravity of the serum in a large number of cases, when it was shown that, while after puberty in the female there was a fall in the specific gravity of the whole blood, there is at the same time an actual increase in the specific gravity of the serum.

In the first case of chlorosis examined, the specific gravity of the whole

blood was 1030; that of the serum alone 1028, which was higher than any the author up to that time had observed in any male. In eight other well-marked cases of chlorosis there was in every case a blood specific gravity much below normal, while in these eight cases the mean for the serum was 1027.3, which is not lower—possibly higher—than the mean in healthy males of the same age.

Because chlorosis occurs at the time when the specific gravity of the blood in a healthy female has a natural tendency to fall, the author some years ago concluded that chlorosis is simply an exaggeration of a physiological effect. At the present time he is more than ever convinced that chlorosis is an exaggeration of a change which normally takes place in the blood of a female at puberty, a change which, like the chlorotic condition, does not affect the blood of the male. He concludes that the blood plasma in the female at puberty tends to become heavier than in the years preceding puberty. No such change takes place in the male. Chlorosis is liable to occur at the time of this change. The specific gravity of the plasma is not necessarily altered in chlorosis, and the blood in chlorosis is not necessarily hydremic.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

ERRATA.

In the issue of last month several errors occurred in this department, as follows:

Page 700—For " $\frac{7}{8}$ M." read 7 to 8 M.

Page 701—For "gelatines" read gelatine; for "Soltan" read Soltau.

Page 702—For "ulcerous obstruction" read venous obstruction; for "ulcers" read veins.

Page 704—For "tha tit" read that it.

THE DIPHTHERIA BACILLUS.

In so modern and scientific a work on medicine as that of Osler, we meet with the statement that the bacillus of diphtheria is to be found in the pseudo-membrane only, not in the submucosa, or blood, or internal

organs. This was written in 1892. The second edition will probably show a change here. Frosch reports the discovery of the specific bacillus in the brain, lungs, liver, spleen, kidneys, cervical and bronchial glands, blood, and pericardial and pleural fluids in ten out of fifteen cases; whilst the John Hopkins Hospital bulletin for April, 1893, contains a series of short articles in relation to the dissemination in the body of Loeffler's germ which are of great interest. Abbott and Ghiskey, of Philadelphia, record observations made on guinea pigs in which certain minute foci in the omentum which attracted their attention were discovered to contain diphtheria bacilli, the foci consisting mainly of polynuclear leucocytes. These foci, in the opinion of the observers, resulted from off-carriage through the lymphatic circulation of bacilli from the seat of inoculation. Flexner, in the same bulletin, reports the finding of the Klebs-Loeffler bacillus in broncho-pneumonic patches occurring in the course of diphtheria; whilst, more interesting still, W. T. Howard records a case of malignant endocarditis due to a bacillus which neither he nor Dr. Welch could distinguish from that of diphtheria. In cultures, as well as morphologically, they agreed exactly.

FISH DO NOT TRANSMIT TUBERCULOSIS.

Prof. Combemale (*Bull. Méd. du Nord*, April, 1893), of the Faculty of Medicine of Lille, has undertaken a series of experiments bearing upon the transmissibility of tuberculosis through fish. When one takes into account the fact that whole families of fishermen in Iceland, and particularly in Canada, succumb to phthisis, it might naturally be supposed that fish had something to do with it. Combemale's experiments, however, show that even fish which have been fed with bread containing tubercle germs, and that have lived in water infected with tubercular sputa, never become tuberculous. He has also shown that in carp inoculated in the muscles with tubercle the bacilli can be but rarely demonstrated, and these have lost their virulence and do not infect guinea pigs.—*Rev. Intern. de Bibliog. Méd.*, Jan. 25, 1893.

A NEW CULTURE MEDIUM.

Marchal (in the *Bull. de la Soc. belge de Microscope*, Jan., 1893) recommends the following:—White of fresh eggs, diluted with distilled water and mixed with a 1-1000 solution of sulphate of iron. The iron is to prevent coagulation in sterilizing, and is added in these proportions: To a litre of a 1 to 5 per cent solution of egg albumen add from 1 to 5 per cent. of iron solution. This medium is useful for diphtheria bacilli, coli communis, staphylococci, etc.—*Rev. Int. de Bib. Méd.*, June 25, 1893.

BACILLUS BILLET-DE-BANQUUS.

Acosta and Grand Rossi have been studying the bank bills of Havana and the microbes deposited thereon. They found that the weight of the bills actually increased during their circulation because of the sweat, grease, and dirt deposited upon them. In these deposits thrive the microbes. In two cases the number of microbes exceeded 19,000 upon the surface observed. Among these microbes there was one bacillus which appeared special, and which has been named *Bacillus billet-de-banquus*. It is septic. Inoculated in rabbits and guinea pigs, it caused them to die rapidly. There were also found the bacilli of tuberculosis, of diphtheria, and the streptococcus of erysipelas, as well as several other pathogenic forms.—*American Microscopical Journal*.

NEPHRITIS OF MALARIAL ORIGIN.

We are now fully able to appreciate why anemia should be so common a manifestation in the course of malaria; why under certain conditions of virulent intensity the pernicious forms should terminate fatally; why under other conditions thrombi should form in the blood vessels and give rise to symptoms as variable as the organs in which the morbid process takes place. By the gradual accretion of knowledge of this kind, we are prepared for the announcement that malarial infection may give rise to nephritis. Of this interesting association three instances are reported by Stefanowicz (*Wiener. klin. Wochenschr.*, No. 20, p. 365). In each the subject had lived in a malarious region; specific organisms were found in the blood; all of the symptoms, including the presence in the urine of albumin and casts, disappeared upon the administration of quinine in antiperiodic doses.

Three explanations of these remote or secondary complications of malaria at once suggest themselves: First, a toxic process; second, thrombosis; third, hemorrhage. Without here entering into a discussion of the various possibilities in the case, we venture to express the view that the first proposition is that which in most cases best explains the conditions present. There is much reason to believe that in diseases of malarial origin toxic products are set free in the circulation, primarily as a result of the activity of the parasites present, and secondarily as a result of their destructive influence upon the red blood corpuscles.

The subject is one of practical interest, and worthy of further study. In this connection it is interesting to note that methylene blue has already been recommended in the treatment of nephritis, as well as of malarial disease.—*Ed. Phil. Med. News*, June 24, 1893.

Editorials.

THE MEDICAL COLLEGES.

THE medical colleges in the various parts of Canada were opened during the first week in October, and the regular work for the Michaelmas term is now in progress. We are not in a position to give figures, but we understand the numbers of new students are large, though they may fall a little short of those of last year. It was generally supposed that the new regulations of the council, as we pointed out in our last issue, would have some effect towards diminishing the numbers of students entering upon the study of medicine. Since the session opened, however, it is supposed by many that the reductions will not be great—in fact, not so great as many practitioners would like.

Those who desire to qualify for practice in the Province of Ontario will be required from this time forward to spend five years in the study of medicine before presenting themselves for the final examination. According to the announcement of the College of Physicians and Surgeons of Ontario, the professional examinations are divided into three parts—primary, intermediate, and final. The primary examination shall be undergone after the second winter session; the intermediate after the third or fourth winter session; and the final after the fifth year. The ordinary primary subjects will be embraced in the primary examination; the ordinary final subjects in the intermediate examinations; and the following subjects, clinical medicine, clinical surgery, diseases of women, and diseases of children, in the final examination. The regular course of study will include attendance during four winter sessions of six months each, and one summer session of ten weeks, and clinical work during the fifth year, six months of which may be spent with a registered practitioner in Ontario, and six months at one or more public hospitals, dispensaries, or laboratories devoted to physiological or pathological research—Canadian, British, or foreign.

We publish in this issue the opening address of Professor A. B. Macallum in the Medical Faculty of the University of Toronto. It will be read with great interest by those who appreciate in any degree the wondrous advances which have been made in scientific medicine in recent years.

THE CANADIAN MEDICAL ASSOCIATION.

WE publish in this issue a report of the last meeting of the Canadian Medical Association, held in London, Sept. 20th and 21st. The meeting was certainly not a pronounced success in all respects, but it was in many ways useful, as well as pleasant and enjoyable. There were present altogether eighty-eight—a very small number, considering the prosperous and well-peopled district in which it was held. The profession of London were exceedingly kind and hospitable to the visitors, notwithstanding the fact that it was a busy time for the doctors on account of the large crowds in attendance at the London fair, which was going on at the same time.

The next meeting will be held at St. John, New Brunswick, under the presidency of Dr. Harrison, of Selkirk. It was generally understood that Dr. Harrison well deserved the honor which has been conferred upon him. The decision to meet in one of the lower provinces was not reached without due consideration and considerable discussion. As long as the association preserves its peripatetic character, it is only just that a meeting should be held occasionally in the maritime provinces. The few who attended the last meeting at Halifax will remember that it was in many respects an exceedingly pleasant one, and those who will be able to attend the next meeting at St. John are likely to get a very cordial and warm reception.

We hope that there will be a fair representation from all the western provinces, and think the various local societies should make special efforts to assist in that direction.

The work of organizing a meeting in New Brunswick, while the chief officers live in cities and towns separated from each other by such magnificent distances, will be in some respects difficult. We understand, however, that the local committee of arrangements, composed of able and energetic men in the "lower provinces," will do a large portion of the work. If the various sections from British Columbia to Quebec will simply send men and papers, Nova Scotia and New Brunswick will guarantee a successful and pleasant meeting.

To individual physicians we desire to point out the fact, which is of course well known, that a summer trip from the various parts of Canada to the eastern provinces is a most delightful one. It is becoming quite the fashion, we are glad to say, for physicians to take an annual holiday. We hope that many will consider the matter during the coming winter and spring, and make their arrangements to spend a pleasant vacation next summer in a trip to New Brunswick and Nova Scotia, and at the same time attend the meeting of our national medical association.

Meetings of Medical Societies.

THE CANADIAN MEDICAL ASSOCIATION.

Reported by Dr. J. N. E. Brown, Official Stenographer of the Association.

The twenty-sixth annual meeting of the Canadian Medical Association met in Victoria Hall, London, Ont., Wednesday, Sept. 20th, at 11 a.m., Dr. Chas. Sheard, of Toronto, as president.

The first session was devoted to business, there being no papers read.

Dr. Bray, of Chatham, after thanking the members for their kindness and consideration to him as president for the last year, introduced Dr. Sheard as his successor.

Dr. Birkett, of Montreal, secretary, read the minutes of last session, which were adopted.

A motion was then introduced asking that fees be required only of members in actual attendance at the association. Another, that after this those members who were to read papers and were unable to come should telegraph such inability to the secretary, so that the programme might be more easily carried out.

The secretary then read a communication from the National Bureau of Bibliography, Washington, D.C., informing the members of its value as a storehouse of medical literature from which they might procure information on any medical subject in which they were interested as students or lecturers.

Drs. McGregor, Campbell, Butler, Hobbs, and Weld, of London; Drs. Starr, B. E. McKenzie, and J. N. E. Brown, of Toronto; and Dr. Smith, of Quebec, were elected members of the association.

The president proposed that some provision be made for reporting the proceedings of the association, and named a committee to arrange for such reporting. Dr. Brown, of Toronto, was chosen to do the work.

The nominating committee was then balloted for, Drs. McPherson and Bray being appointed scrutineers. The result of the ballot showed the following gentlemen to have been elected: Roddick and Stewart, of Montreal; Fulton, of St. Thomas; Graham, McPhedran, and Macallum, of Toronto; Olmsted, of Hamilton; Harrison, of Selkirk; Holmes, of Chatham; and Bucke, of London.

Drs. R. A. Reeve, J. F. W. Ross, H. A. Macallum, T. S. Harrison, and Holmes, of Chatham, were chosen as the committee on ethics.

The subject of a uniform Canadian pharmacopeia was then discussed, and a committee consisting of Drs. Blackader, of Montreal; H. A. Macallum, of London; and Jas. Macallum, of Toronto, teachers of therapeutics, were appointed to memorialize the government in this regard.

AFTERNOON SESSION.

After preliminary business the president proceeded with his address, whose eloquent periods held the association in rapt attention and elicited the most hearty applause.

He expressed gratitude to the association for his election, saying that he felt honored to fill such a position, which had formerly been filled by men who had made the profession of medicine in Canada illustrious. He combated the statement made by some that the influence of the association was on the wane, and its work usurped in part by provincial institutions. It had for twenty-six years stood out against charlatanism; it had developed a feeling of friendship and unity among the profession; it had stimulated and helped men to professional excellence, and had given medical men an increased love and zeal for their calling. It had not outlived its usefulness. Such men as Howard, Ross, Osler, Hadder, Workman, and Wright, not to speak of men whose advancing years prevented them from attending this association, were examples of all that was good and noble and inspiring to the younger members of the profession. If a man would do good work, he needed to devote his whole attention to his profession. It was unfortunate that some of the younger men presumed that because they thought they had the latest and most improved methods they should parade them in such a way as to reflect on their older colleagues. Thackeray had asked how it was that the evil which men did spread so widely, whilst each good, kind word seemed never to take root and blossom. The president went on to say: "It appears to me scarcely conclusive to professional unity that we should have in the various provinces of the Dominion separate licensing bodies which confer the privilege of practising only for the province, and that those of us who to-day may reside in Ontario, in travelling to Manitoba or British Columbia, require there to pass a period of naturalization before we can even be examined, and then to again pass an examination which proves our qualification to practise, and this in our own country. Surely we are all Canadians; and if the spirit of the time means anything, we are united in patriotic feeling and national progress? Why should it be different in medicine? I may express the earnest hope that the time is not far distant when there will be some central examining board or boards for the whole Dominion, when a license from such a body will be a qualification to practise from one end of the country to the other." (Applause.) The doctor then spoke of the great strides medicine had made as a result

of bacteriological investigations. Curative methods followed correct diagnosis. Bacteriology was a practical scientific means to aid in this direction. He saw within the next decade a solution to the difficulty which beset the cure of phthisis and such diseases, whose causation had during the past decade been established. The science of medicine, like others, must depend upon the correlation of facts ; upon the comparison of cases alike in many respects, but differing somewhat in their phenomena. Much difficulty there was in ascertaining what cases were sufficiently similar to become comparable, due to insufficient and erroneous records of the phenomena observed. Few men could, for and by themselves, see and describe the things before them. It took a long time before men could see the difference between measles and scarlatina; between typhoid fever and typhoid. Plato said : " He shall be a god to me who can rightly divide and define." Men, the speaker said, who have this faculty we cannot produce by any system of education ; they come, we know not when or why. It was science, he said, that laid the basis upon which were wrought the revelations in practical medicine.

" Science seams and scars the detested face of hypocrisy and lies, adds beauty to beauty, grace to grace, truth to truth. It decks the flower of the field with loveliness, till all the universe beats with one heart, pants with one breath. It goes hand in hand with art. When the tale of great deeds ceases to thrill; when the awe has vanished from the snow-capped peak and deep ravine; when the lily of the field becomes no longer beautiful; when the tale of suffering causes no pity, then, indeed, and not till then, may science be said to have devoured art."

Science and practice, he said, should go together. It should be the work of the pathologist to study the etiology, diagnosis, and progress of the case. Paget was a pathologist and surgeon ; so was Billoth. Koch was a general practitioner; Cheyne a consulting physician. In the lines of scientific attainment, Canada was fully abreast of the times. There were too many men in our country, however, who were possessed with the sordid ambition of the utilitarian, who thought they could not leave their practice a day to gather such knowledge and enthusiasm, have their powers of observation quickened, receive such mutual benefit as would come to them from attending medical associations. The president eulogized the good work of our colleges and the Medical Council of Ontario. In concluding, the president said that the government of the province was liberal, leaving to the profession the ordinance of its own laws; and did it show worthy intelligence on the part of those claiming to be ornaments of the profession to urge upon the gubernatorial body the wisdom of withdrawing from them what was justly and legitimately their own? The masses sent their representatives to represent them in certain issues, and, if

they did not do so they changed their representatives. "This is one law of political economy throughout the world. Have the physicians of our province not enough intelligence to be entrusted with the same privilege?"

Dr. Hingston was voted to the chair. Dr. Bray moved and Dr. Reeve seconded a vote of thanks to Dr. Sheard for his address. This was carried with applause. The president made a suitable reply.

Dr. J. E. White, of Toronto, seconded by Dr. Bray, of Chatham, made a motion to the effect that a committee be formed to report some scheme whereby the barriers that exist to interprovincial legislation might be overcome, so that practitioners in one province might be enabled to practise anywhere in the whole Dominion without re-examination, and that such committee be composed of Drs. Praeger, B.C.; Hingston and Mills, of Montreal; Waugh, of London; Sheard, of Toronto; Harrison, of Selkirk; Taylor, of Goderich; Worthington, of Sherbrooke; and Ross, of Toronto. Carried.

The next feature was the report of a case of eclampsia by J. Campbell, of Seaforth, Ont.

Patient, aged thirty-two, complained of headache, extending down neck to shoulder. Without physical examination, he administered something for what he supposed was neuralgia. He had not noticed that she was pregnant. In three hours patient had convulsions; was called again and found patient suffering severe head pain, and also in the epigastrium. Temperature normal; pulse full and bounding. Found patient to be about seven months pregnant. Administered an enema of $\mathfrak{z}$ i. of chloral. This induced sleep. Had administered elaterium, which was soon effectual. Was unable to get urine. In few hours called, and while about to give another injection patient took another convulsion before chloroform could be given. Found urine full of albumen on examination. Very soon patient had another convulsion. Repeated enema. Found os dilated to the size of a quarter. Ruptured membranes. Labor pains came on, and after a sleep till 3 p.m. (case having commenced at 11 p.m. day before) was delivered of living child. Gave $\mathfrak{z}$ i. ergot half an hour before delivery. Placenta delivery normal. No hemorrhage. Administered a diuretic mixture of pot. acet. and digitalis. Headache disappeared and all symptoms abated.

The doctor concluded his paper by saying that the subject was one that required further investigation, but thought that the following statements were justifiable in the light of modern pathology:

(1) Cell activity, both of mother and fetus, produced substances pernicious to mother if not excreted. (2) The excretory function was inadequate in the pregnant. (3) The unknown accumulated poison caused the eclamptic seizure. (4) The convulsions are believed to be the result of anemia of the brain, caused by the contractions of the arterioles—probably by direct action of some poison on the brain substance itself.

On account of the intense muscular action, the blood was driven into the internal organs—brain, kidneys, etc., causing apoplexy, and abrogation of the renal function, etc. Treatment, he said, should be directed to elimination; diminishing of the nervous sensibility; if convulsions ensue, to save child without adding risk to the life of the mother; and, lastly, to guard the mother from injury during the attack.

Dr. Laphorn Smith expressed entire approval of what Dr. Campbell had said in his paper. He thought the cause was due to pressure on the venous circulation of the kidneys, causing nephritis. He did not agree that the anemia of the brain was the beginning of it. The nephritis caused the albuminuria; the albuminuria caused the anemia. The indication for treatment was to remove the pressure by lessening the size of the uterus. He favored the use of chloral to assist in the dilatation of the os and to lessen reflex action. He thought hastening labor did not tend to cause convulsions.

Dr. Harrison outlined the history of a recent case of his where he employed bleeding, a remedy he had spoken at some length about in the treatment of this affection at the meeting of the Ontario Medical Association. He bled freely, with immediate and permanent effects. He employed as well enema of chloral and brandy.

Dr. Bethune, of Seaforth, corroborated what Dr. Campbell had said regarding his case. He was in favor of bleeding in sthenic cases, not in anemic; but he regretted that the young practitioner of to-day did not know how to perform this simple and often effective operation.

Dr. Irving, of St. Marys, asked if it were proper to give ergot in eclampsia. Did it not cause contraction of the arterioles—a thing to be avoided? Dr. Smith had said that the pressure of the fetus *in utero* was the cause of the convulsion. How was it that they often did not occur until after delivery?

Dr. Holmes, of Chatham, said that he was reminded of one thing in what Dr. Campbell had said—the danger of making too cursory an examination of the patient. Dr. Holmes pointed out the benefit derived in causing profuse sweating. He leaned to the theory that the convulsions were due to the circulation of some toxic element in the blood, independent of the nephritis.

Dr. Campbell closed the discussion.

Dr. Canniff, of Toronto, then gave an address on

SANITARY SCIENCE—SOME OF ITS EFFECTS.

Sanitary science, he said, was not a distinct and separate science, but rather a development of medical science, and that the medical man should be employed not only to cure, but to prevent disease. He advocated that we should have specialists on the subject. He also advocated the

same observation by individuals and families in regard to sanitation as is done in the case of the state and the municipalities ; and as it was desirable to legislate in regard to preventable diseases, so the principle was equally applicable in relation to individuals and families. It was nobler to prevent than to cure. The principles of hygiene should be taught by the parent and continued in the school. He advocated the principle of families employing a medical man by the year, who should make regular visits, and advise as to sanitation ; by so doing sickness would be prevented.

Dr. Arnott thought the idea of families employing medical men by the year good in theory, but bad in practice. His experience was such. He also thought it would be a bad education to the family itself. He thought the importance of a knowledge of sanitary science by medical men in the cure of disease should be emphasized as well as the prevention of it.

Dr. Bethune liked the idea of employment by the year, if possible. His experience had been that, having agreed to a certain amount for his services, he was called so frequently as to make it non-paying. If families could be educated up to it, it would be well for the country, and much disease prevented.

Dr. Wesley Mills thought that it would be practicable for the physician to look generally to sanitation, and to be paid extra when specially sent for. Family tendencies would then be understood. Until physicians were employed in the way mentioned, the best results would not be obtainable. He thought the appointment of specialists a good thing, and stated that in some places this question was being agitated.

Dr. Canniff thought he had been misunderstood. He only intended saying that if regulations as to hygiene worked well in municipalities, so it ought to in families. Statistics show that the practice of hygiene is a saving operation—saving the man and saving the labor.

Dr. Anglin, of Verdun, followed on a paper on

THE GENERAL PRACTITIONER AND THE INSANE.

This was a very practical paper. The subject of insanity was one which had been left alone too much by the general practitioner. It was important that he should know more about it, for on him rested the diagnosis of insanity, possibly the administration of treatment, the recommendation to hospitals, and the certification of the patient's mental condition. Generally speaking, it was better to advise hospital treatment, but in some cases this would be impossible. It was much less expensive, and the charge of environment was generally beneficial. He was glad that the old prejudice against insane hospitals was becoming lessened. It should be taught to the general public that insanity was a disease, not a crime. The doctor then described the hospital of to-day, showing that it was not a place to be shunned, as was the one of days gone by. If a man were called

on to treat a case of insanity, he should recommend a change of scene; the employment of one or two trained nurses. Relatives generally made poor attendants, as did also ordinary sick nurses. Sleeplessness should be immediately combated by giving moderate exercise, a drive, a meal, or a hot bath. Of remedies, alcohol, hyoscine, paraldehyde, sulfonal, chloral hydrate (and opium in cases due to pain) were useful. Constitutional treatment should be attended to strictly. The doctor outlined the points necessary to observe in making out certificates, laying special emphasis on the recording of phenomena actually seen by the examiner. He criticized the stupid methods of admission in certain states, but commended the progress of Canada in this matter. A certain amount of formality was absolutely necessary, and the doctor should be exceedingly exact in replying to the questions on the blanks used. It was wise to find out all one could about the patient before interviewing him. Deception should never be used with the patient, for this often rendered him less amenable to treatment. It was sometimes exceedingly difficult to detect symptoms, so careful to conceal them was the patient often. Three things should be noted—acts, appearances, and conversation. The patient should be told frankly that he was *sick* and needed *hospital* treatment.

This paper was discussed by Drs. Matheson, Arnott, and Mills. Dr. Anglin closed the discussion.

Dr. Harrison, of Selkirk, then followed with a paper on

IS ALCOHOL IN ALL DOSES AND IN ALL CASES A SEDATIVE AND DEPRESSANT?

He had formerly thought alcohol the great stimulant, and the physician who failed to administer it was culpable. Temperance physicians had refused to administer it for fear their patients would acquire the drinking habit. The subject was a scientific one, and should be discussed as such. If alcohol was a powerful sedative and depressant, as some claim, the use of it for so many generations would have caused untold injury, and the number of deaths caused by using a sedative instead of a stimulant uncountable. He spoke of a case in his practice of post-partum hemorrhage which promised to end fatally, and, while preparation was being made to inject blood, brandy had been administered freely per os and per rectum, and under it the patient rallied and recovered. In a case of typhoid fever, lasting seven weeks, and where the patient seemed dying of exhaustion and heart failure, after two weeks of a diet of port wine only the patient recovered, as by a miracle. Another case was one of puerperal fever, an extreme one, with pulse 140 to 150. All medication was abandoned, and brandy and port wine were given in a little milk and beef essence, and effected a permanent cure.

When a patient was nearly moribund, when a feather's weight in the wrong scale must be fatal, and brandy was administered, if the brandy

acted as a sedative the result must be fatal ; but the fact that the patient rallies shows it cannot be a depressant.

Dr. Arnott said he had some diffidence in discussing the subject, as he seemed a "lone bird in the tree." His views were and had been for years that alcohol was not a stimulant in its direct action. The question under discussion, in other words, is, "Does alcohol, or could anything under varying conditions, give the same results?" Suppose the principle were applied to water ; although under some circumstances it causes death, no one would say it was a poison ; the direct and primary action of water is nourishing. The profession are not divided at present as to the sedative action, because all use sedatives to bring about a stimulating result. There was, he said, not so much difference between Dr. Harrison and himself as appeared on the surface. Although opium was a sedative, we get stimulating results from it. He mentioned a case of his in practice, the setting of an old lady's arm—a Colles fracture. He had given her a great deal of pain, and suddenly she became white and pulse imperceptible. He was afraid the patient was dying. He thought it clearly the result of shock and called for whiskey, not as a stimulant (being opposed to that), but to relieve the shock ; none being in the house he gave the patient chloroform, after which the pulse became strong, and the operation was completed. He had another case, one of typhoid fever, in which the depression was very great ; in which he administered whiskey in large doses, an ounce every hour. Being alarmed, he called in another doctor. They administered one-eighth grain of morphia hypodermically, which did much more good than the whiskey.

Dr. Bethune said that alcohol was in one case a stimulant, in another a narcotic, and in another a sedative, according to the condition of the system. If taken in big doses, it was a narcotic. Perhaps some of them had felt the effect. (Laughter.) In neuralgia it was a sedative; when people took a tumblerful at night to put them to sleep, it was a narcotic.

Dr. Gardiner, London, said that by the use of alcohol the pulse got stronger, the eye brighter, the skin warmer, and the body invigorated. Whether it was called a stimulant or narcotic, it should not be used carelessly, but only when there was reason for it.

Dr. Mills, of Montreal, thought it was a subject demanding careful scientific study, especially as its elementary principles were taught in the public schools. The doctor said the necessity for experiment was absolute, and they were not prepared yet for dogmatism. He condemned the present school books as extreme. The children were taught that alcohol under all conditions was a poison. The medical profession should do something to counteract this.

Dr. Arnott said that alcohol was termed a stimulant, an anodyne, and

a narcotic. This was perplexing. The fact that the hospital having the lowest death rate in London, England, did not use alcohol, he made his excuse for speaking on the subject.

Dr. Laphorn Smith spoke of the experiments showing the effect of alcohol on the muscular power; how that soon after administration of the alcohol the individual tested could lift much more, but when the reaction had set in considerably less than at first. It was certainly a temporary stimulant. It affected the great sympathetic which contracted the arterioles more blood being forced into the coronary arteries, thus strengthening the heart.

Dr. H. A. Macallum said there seemed to be physiological evidence to show that all narcotics and poisons were stimulants. The respiratory stimulus was a poison. It could not be that CO_2 , the respiratory stimulant, and ultimately poisonous to that centre, could be a stimulant as secondary to narcotic action. All stimulants for secretion, respiration, and circulation ultimately were narcotic and poisonous. Anesthetics were stimulants in small doses. It could not be argued that CO_2 as a natural stimulant acted as a narcotic.

Dr. Harrison closed the discussion.

Dr. B. E. McKenzie presented a bad case of lateral curvature in which he had used a rawhide spinal support. The patient could be stretched four inches, so much was the curvature. He knew of no other treatment in such a case. It was fitted to a plaster of Paris model and had no seams. It fitted smoothly and seemed to afford much relief. This was the first time Dr. McKenzie had tried it.

EVENING SESSION.

Dr. Hingston, of Montreal, gave the address on surgery. It consisted of an historical review of the subject. He held that in Egypt, before the time of Moses, many so-called modern operations were practised. The Greeks considered surgery a divine art. Pythagorus, about 600 B.C., elevated surgery to a science. The Egyptians and Greeks practised nephrotomy, used tents, issues, and moxas, and trephined the skull; they also practised percussion as an aid to diagnosis, and drew fluid from the chest. Hippocrates made use of immediate auscultation as a means of recognizing disease. But the fall of the Macedonian Empire seriously interfered with the progress of surgery. The Alexandrian school were skilful in abdominal surgery. They first used the catheter 2200 years ago. Ammonius crushed stone in the bladder. There was another retrogression in the science at the time of the Cæsars. Celsus found that there might be rupture of brain substance without fracture of skull. He was first to describe the *contre coup*. Heledonius opened into the bronchial tubes.

The Arabians were credited with greater proficiency in surgery than history will justify; but to them we owe the preservation of Egyptian surgery. The suturing of wounds was practised by Albicasis, also the incising of the kidney for abscess. The Council of Tours forbade the clergy to spill blood. By this prohibition, surgery was divorced from medicine and got a serious set-back. When Columbus discovered America, the physicians of Europe were not superior to the medicine men of the aborigines of America. Vesalius laid the foundation of modern surgery. Paré advocated cupping for displacements of the uterus. Wiseman, in Britain, was original, but crude. His reports of successful treatment of cancer are so remarkable as to arouse suspicion as to the accuracy of his diagnosis. Wiseman believe in the magic royal touch for the king's evil.

Surgery, the speaker went on to say, preceded medicine in this country. The governor of Nouvelle France was always asking for surgeons to be sent out. The people did not need physicians. Dr. Hingston then described the marvellous advances of surgery during the past forty years in the treatment of many surgical cases, but was sorry that in some cases this divine art had degenerated to a commercial question, owing to the greed-for-gold spirit which had extended to some of the members of the profession. He especially cauterized the practice of those one-idea gynecologists who referred all female disorders to the uterus, and instituted a daily tinkering process as a means of obtaining money.

Dr. Eccles' paper,

MOVABLE KIDNEY, WITH TWO CASES OF NEPHRORRHAPHY,

was next read. This condition, he believed, was often overlooked, and something else treated (often hysteria) for it. This resulted from neglecting to examine the kidneys—a matter always to be attended to in obscure cases with symptoms of hysteria, melancholia and general nervousness, and dyspepsia. This organ, having no special support, was in danger of displacement. The thirty cases Dr. Eccles reported were all females. Patients had a dragging-down feeling, or aching in the back or along the urethral lines. In most there was dyspepsia, accompanied by constipation, diarrhea occurring in only four. In six there was an exacerbation of symptoms during menstruation. In some seven there was inability to lie on the side opposite the displacement. Intermittent hydronephrosis was observed in seven. Dr. Eccles then outlined two cases fully. The first had most of the typical symptoms for a number of years, the most prominent being the frequent attacks of severe pain, which at first lasted about an hour, and latterly forty-eight. These were accompanied by swelling inside, followed by its disappearance and a great flow of pale urine. The doctor could feel the kidney. Had support and pad applied, with complete relief. Movement of the organ had kinked the reter. The speedy relief of this condition was conservative to the kidney.

In another case reported the abdominal support failed to give relief. Operation was advised. After the usual incision, the capsule was opened along the convex border one inch in width. Two silkworm gut sutures were passed into the parenchyma three-eighths of an inch deep, two catgut through capsule and fatty capsule above and below, continued through the muscle and fasciæ. The fasciæ were united by separate catgut sutures before those through the kidney and its capsules were tied. Good recovery.

In a second case of operation Dr. Eccles did similarly, but did not dissect up capsule, as it was thickened, and a cystic condition appeared underneath. A good recovery followed.

Dr. Hingston pointed out that a misplaced kidney was more easily felt if the patient leaned forward during the examination. He showed how one might be mistaken by telling of a patient who came to him suffering in this way, upon whom double ovariectomy had been done for its relief. This mistake would not be made if one, by grasping the kidney and making gentle traction downwards, found that pain was experienced, while pushing it upward gave relief. The reverse would take place in the case of the enlarged ovary. In many cases he thought operation unnecessary.

Dr. Bethune had had a few cases. They were all in women, on the right side. The trouble proved most annoying during pregnancy. In one case he had the kidney, on removal, was found to be cancerous. He thought cases of displaced liver were more common than was generally supposed. He did not see how operation could help the patient much, as there would be difficulty in retaining the kidney in position, even after operation, so little was there to which it could be solidly attached.

Dr. Bell, of Montreal, agreed that many of these cases needed no treatment. The condition was often accidentally discovered. But in cases where hydronephrosis developed, some operation seemed to be necessary. He had had no personal experience in the use of the pad and band, and did not think it likely they would do much good. He had operated on patients where this treatment had been tried and found to be a failure. He thought the operation of nephrorrhaphy in many cases effectual in making a permanent cure. At first he was skeptical regarding the operation, but he got over that. He knew of no other means of relief.

Dr. Laphorn Smith agreed with Dr. Bell. The frequency of cases he believed to be due to improved methods in diagnosis. Formerly, they were called hysteria. Dr. Smith wished Dr. Eccles would show his ingenious method of retaining displaced kidney in such cases as are not bad enough for operation. He was reminded of the principal causation of the trouble when he heard a young man remark to his friend after a tight-laced young lady passed by them, "I wonder where she puts her thirty

yards of intestines?" He (the speaker) had not seen any cases of men with this affection. He considered the ounce of prevention to be a modification of the corset. Dr. Eccles closed the discussion.

Dr. H. S. Birkett, of Montreal, read a paper describing a

CASE OF SUBCORDAL SPINDLE-CELLED SARCOMA AND ITS SUCCESSFUL
REMOVAL BY THYROTOMY."

The doctor outlined a history of the case. The principal symptoms were marked dyspnea, hoarseness, until almost complete aphonia occurred; in the later stage, almost complete suffocation when in the prone position. Patient was thin and anemic; was pregnant; was compelled to sit upright, with mouth open. On examination the laryngoscope showed a large subglottid tumor nearly filling the lumen of the larynx, dusky red in color; vocal cords free. Tracheotomy was performed, low down; the tube made breathing easy. Labor was induced; tumor, strange to say, decreased in size. In three weeks tumor was removed by thyrotomy. Incision was made between the alæ down to upper border of cricoid. On separating tumor was well exposed; it was attached to right ala of thyroid just below vocal cord. After removal site was cauterized with chromic acid. Three deep silkworm gut sutures closed deeper structures; and superficial ones the wound externally. Microscopical examination revealed it to be a spindle-celled sarcoma. The condition was unique. The operation of the thyrotomy was practically devoid of danger in itself; its result depended much upon what it was done for. As to its employment in tuberculosis, opinion was divided. The doctor closed by detailing at length why he adopted the method he did rather than removing the growth *per vias naturales*.

Dr. Osborne, of Hamilton, commented on the decrease in the size of the tumor after delivery. He supposed it was on account of some reflex condition between the uterus and the tumor.

Dr. Birkett explained that the whole arterial system was in a state of great tension during pregnancy; after delivery this would lessen much, and hence there might be a lessening in the size of the tumor due to the fact.

A splendid banquet was given to the visitors by the local members of the profession at the Tecumseh House, beginning after nine o'clock. About two hundred sat down. Dr. Hodge presided, and introduced the toast list. "The Queen" was honored with the National Anthem. Dr. Hingston, of Montreal, and Dr. Praeger, of British Columbia, responded for "The Dominion" in witty speeches. Dr. Harrison, of Selkirk, spoke on behalf of the Ontario Medical Association. The chairman, in toasting "Our Guests," warmly welcomed the visitors. He regretted that the meeting was at the same time as the Western Fair, as it had interfered with arrangements. Dr. Sheard, the president, replied warmly. Drs. Canuiff, of Toronto, and Birkett, of Montreal, also spoke to the toast. Mr. C. W.

Davis sang, and the "Ladies" were proposed by Dr. J. S. Niven, vice-chairman, and championed by Drs. Thornburn and Anglin.

THURSDAY MORNING.

Dr. Holmes, of Chatham, read a paper which consisted of a report of two cases of laparotomy for unusual conditions. The first gave a history of miscarriage preceded by hemorrhage, and this was followed by pain in the left iliac region, where a swelling was discovered, like an orange in size and shape, two inches to the left of the uterus, and fluctuating. Laparotomy was performed, and an ovary containing three ounces of pus removed. The abdominal cavity was flushed and the usual dressings applied; no drainage tube. The important point in the case was that there was no disease of the tubes. This was unique, as far as he was able to make out from the records.

The second case Dr. Holmes had seen after the patient had been ill ten days. Pain was present in right iliac region, where the attending physicians detected some hardness. Chills and fever, constipation, vomiting, and great prostration were succeeding symptoms; also great tympanites. No tumor could be made out at this time. Exploratory incision was deemed necessary. Appendix was sound. There was no obstruction, but peristalsis was absent. The gut was stitched to the wound with the idea of incising if bowels did not move soon. This had to be done, the patient being then almost *in extremis*. A copious evacuation of fecal matter from the fistula took place. Stimulants could then be retained, and the patient improved. But the fistula was a great annoyance. Dr. Holmes made several unsuccessful attacks to close it, but failed. Patient was then transferred to Harper's Hospital, Detroit. Resection of the affected portion of bowel was made and the ends joined by Murphy's buttons. Patient made a good recovery. The doctor showed the kind of button used, and gave a report of operations in which it had been successfully employed.

Dr. Atherton agreed with Dr. Holmes that abscess of the ovary without affection of the tube was rare. In regard to peritonitis with paralysis, he found puncturing to allow the gas to escape a good measure, two or three times if necessary. He had seen no trouble arise from such proceeding. This might be tried and laparotomy avoided.

Dr. Holmes replied to this by saying that he had employed this measure, but it was in cases where the abdominal walls were thin. Where the walls were thick, as in the case reported, he considered it unwise. In fact, when the abdominal wall was opened one of the assistants introduced a small trachea, but without relief of the symptoms.

Dr. Bell, of Montreal, then presented a paper on

SOME UNUSUAL CONDITIONS MET WITH IN HERNIA OPERATIONS.

The doctor reported five cases, all of marked interest. The first was a

case of hernia in a woman, *æt.* 55. There were not the symptoms of strangulation, but she suffered great pain. Temperature 102°, pulse 100, bowels open. The tumor was situated in Scarpa's space in right groin, looked livid red, was indurated at the base and fluctuating; a pointing abscess, in fact. It was opened; a pint of fetid, sanious pus escaped. A mass of omentum protruding was cut off. Then the interesting point in the case was noticed; in the centre of the mass was a tubular cavity, resembling the large intestine. It was stitched into the skin wound. To the outer side of the mass the appendix was found strangulated and sloughy. This was removed and bowel returned. Patient made a good recovery.

The second case was one of congenital inguinal hernia attached to the bottom of the tunica vaginalis. The hernia was easily reducible, but would not stay so. It was so troublesome that operation was decided upon. It was omental, and the peculiarity was—which accounts for the inability to retain it—a hydatiform cyst growing from the omentum and adherent to the bottom of the sac of the tunica vaginalis testis, just long enough to allow the hernial contents to escape within the internal ring and yet short enough to maintain constant traction upon this portion of omentum and bring it down in spite of any truss. The protruding omentum was tied and the cyst was removed. Patient made a good recovery. This was a unique case, Dr. Bell thought.

The third was a case of congenital cecal hernia in a child three years of age. Hernia had existed from birth, and was irreducible. Radical operation done. Through the peritoneum, the cecum and ileum could be made out, and were found adherent to the cord. Even after splitting canal, it was impossible to reduce. When peritoneum was opened and traction made on ileum, it readily slipped back. The superfluous neck of the sac was dissected away and the remainder sutured down around the cord, the conjoined tendon brought over and sutured to Poupart's ligament, and canal closed by a suture.

The next was a most interesting case, where there was hernia of a tubercular ovary and tube through the inguinal canal of a female infant. It was diagnosed omental hernia, was solid to feel, freely movable, pediculated, and gave an impulse when child cried. Was exposed, but seen not to be omentum. Resembled undescended testicle, but patient was female. Was removed—diagnosis still uncertain. Operation finished successfully. Subsequent microscopical examination revealed tubercular cystic ovary.

The final case cited was a most interesting one—suppurative inflammation of hernial sac simulating strangulation, onset sudden (from a fall), and constitutional symptoms rapid, calling for immediate action. Cutting down, sac was found very thick and edematous, from which, upon incision,

half an ounce of sero-pus escaped. It was occluded above. Another incision was made into the sac above the occlusion and a loop of small intestine, scarcely constricted, slipped back into abdomen. Patient got entirely well. The doctor inclined to think patient had suffered from hernia before, that sac had become shut off, and that the reputed recent cause merely pressed it further down, and the manipulation for reduction had set up an inflammation, possibly through the agency of the ameba coli, which went on to suppuration.

Dr. Canniff asked how Dr. Bell diagnosed the omental tube which was cut off from the intestine.

Dr. Bethune detailed at length a case of strangulated hernia which was not operated on, on account of stubbornness of patient. Suppuration occurred and a fecal fistula established, which finally closed and patient made a good recovery.

Dr. McFarlane, president of the Ontario Association, and Dr. Temple, delegates from that body, were invited to seats on the platform.

Dr. Bryce was not present to read his paper on

PROPHYLAXIS IN TUBERCULOSIS.,

but his paper was handed in as read. It was pleasant, the paper stated, to see so much attention directed to a disease causing a greater economical loss than any other agent except alcohol. He gave some condensed results of a study of the subject taken from the mortality returns of the Registrar-General's Department of Ontario, and arranged the tables so as to show the number of deaths occurring in persons of the same family. He also gave a tabular statement of the total mortality returns of Ontario institutions for the insane, showing the proportion of deaths from consumption among patients. He also presented a tabulated list of the various diseases, showing from the annual report of the Inspector of Public Institutions for 1892 a large proportion suffering from this disease. Five per cent. of the total inmates of our hospitals suffered from this disease. The elements in prophylaxis partook of three qualities—individual, municipal, and governmental. Individual prophylaxis depended almost wholly upon the intelligence of the infected person, his habits of life, and the extent to which he is impressed with the duty of protecting others. As to municipal, the first measures are largely those of improved local sanitation. As to governmental, it consists mainly in giving direction, financial support, and legislative sanction to municipal efforts. He said that had he not been an interested and active spectator for two years of the manner in which legislation has kept in touch with public opinion, he would think this visionary. He cited the numerous acts providing for treatment of the blind, dumb, etc., and thought that there were but two limits to the class of municipal and governmental work, viz.,

the degree to which the public are informed regarding the need for work in this direction, and the extent of municipal and governmental financial ability. This work was not to be considered relegated to the police, but to the action of intelligent Christian men and women. The two objects to be held in view were (1) the alleviation or cure of the tubercularized patient, and (2) to lessen the danger to the healthy public. In the higher altitudes of our province we had suitable climatic conditions. In such places homes might be established for patients—places where they might go and live. These places might be made self-sustaining, as many of the patients would be able to work. That such homes would be popular may be concluded from the success of such semi-private institutions in Germany.

The Nominating Committee presented their report as follows: It first recommended that the next place of meeting be St. John, N.B.

Dr. Canniff did not favor going so far. Few, if any, physicians came from that section to the annual meetings in Ontario.

It was explained that St. John was tacitly promised the meeting next year, in view of London getting it this year, on account of the movement westward to the World's Fair.

Dr. Praeger urged the claims for British Columbia for 1895. The St. John recommendation was adopted.

The report, after a few amendments, resulted in the election of the following officers for the ensuing year:

President, Dr. Harrison, Selkirk, Ont.; general secretary, Dr. F. N. G. Starr, Toronto; treasurer, Dr. Small, Ottawa; vice-presidents—Ontario, Dr. F. R. Eccles, London; Quebec, Dr. Stewart, Montreal; New Brunswick, Dr. Christie, St. John; Nova Scotia, Dr. Muir, Truro, N.S.; Manitoba, Dr. Spence, Brandon; Northwest Territories, Dr. Newburn, Lethbridge; Prince Edward Island, Dr. Taylor, Charlottetown; British Columbia, Dr. McKechnie, Nanaimo. The provincial secretaries elected were: Ontario, Dr. I. Olmsted, Hamilton; Quebec, Dr. Anglin, Montreal; Nova Scotia, Dr. Keen, Cow Bay; New Brunswick, Dr. McLaren, St. John; Prince Edward Island, Dr. Johnston, Charlottetown; British Columbia, Dr. Walker, New Westminster; Manitoba, Dr. McDiarmid, Winnipeg; Northwest Territories, Dr. Calder, Medicine Hat.

It was moved and seconded that all the papers be read in the order received by the secretary, and if the writer be not present at the time it should be read that the paper be placed at the bottom of the list; and, further, that it was desirable that an abstract of the paper be made and forwarded to the secretary at least three weeks before the date of the association. After a good deal of discussion this was carried.

THE ASSOCIATION VISITS THE ASYLUM.

On invitation of Dr. Bucke, of the London Insane Asylum, the members of the association went out to that institution for luncheon, being conveyed out on a special C.P.R. train. They were taken first to inspect the sewage system. The sewage is used as a fertilizer on the farming land of the institution. The luncheon was thoroughly enjoyable. Numerous toasts were drunk heartily, while the asylum orchestra, under Professor Sippi, discoursed sweet music.

THURSDAY AFTERNOON.

The association assembled in Victoria Hall at 3.30.

Dr. McPhedran addressed the association on the subject,

THE MORE RECENT METHODS OF DIAGNOSIS AND TREATMENT OF DISEASES OF THE STOMACH.

He said that formerly it was taught that the stomach was the principal and only organ of digestion, but now it was known that the whole alimentary tract takes part in the digesting process. He said that the function of the stomach was threefold, viz. : (1) To receive food and to partly change starchy and albuminous food into absorbable bodies. (2) To prevent the fermentation of the food. (3) To discharge its contents partly into the blood, but chiefly into the duodenum.

For the first three-quarters of an hour no free hydrochloric acid was, he said, present in the stomach, as it combined with the albuminates ; if present, there was a hypersecretion of it, which arrested the digestion of the starches. It reached its maximum in amount in four or five hours. The gastric juice retarded the action of or destroyed more germs, specific and non-specific, than any of the other digestive ferments. The duration of normal digestion, he said, depended on the character and amount of the food ; also on the age of the patient. The symptoms of stomach disorders were multiple and various. Until the last decade our knowledge of gastric disorders depended on experiments and symptoms, accidents, etc. Now we owe much of our knowledge to the stomach tube. This, he said, should be soft. The patient not only readily became accustomed to it, but even often would request its use. An approximate knowledge of the stomach's contents would, in most cases, be all that was requisite for the physician in active practice. A test breakfast should be given consisting of a round of toast or a dry roll, with a cup of water, or of weak tea, or coffee, without sugar or milk. This should be withdrawn from the stomach after one hour's digestion. The acidity of a normal stomach, he said, should be due to lactic acid for the first thirty or forty minutes ; after this time to free hydrochloric acids. These acids were detected by Uffelmann's and Gunzberg's tests respectively, which the doctor described. It had been taught that absence of hydrochloric acid indicated carcinoma.

This was not so. It might be absent in other conditions and present, even excessively, in this. However, it could be said that its persistent presence formed strong evidence that cancer did not exist. The tube was useful in discriminating between gastric catarrh and carcinoma. The washing would be followed by improvement in cases of the first ; but not much in the second. Its principal use, however, was in dyspepsia, in determining the acidity of the contents. On this our treatment could be based. The lavage stimulated the gastric gland secretion, and stimulated the muscular walls to renewed activity. Proper diet and general treatment would suffice to cure many cases. This treatment was particularly useful in alcoholics ; also in infantile digestive disturbances. Constipation was relieved by its use ; also the gastric neuroses, and reflex vomiting of pregnancy, the patient being fed through the tube. This subject was one of immense importance on account of the immense frequency of disease of the stomach ; four-fifths of all the ailments medical men were called on to treat being caused by derangements of this organ.

Drs. Ferguson, Wesley Mills, Gardiner, and Praeger discussed the paper.

The meeting then divided into sections, Dr. I. H. Cameron presiding over the surgical side, while Dr. Moorhouse presided over the medical.

SURGICAL SECTION.

Dr. Primrose presented a paper ; subject,

A LARGE SARCOMATOUS GROWTH IN THE NECK, WITH SECONDARY DEPOSIT IN THE LUNG.

It was found in a boy four years of age, a patient in Victoria Hospital, Toronto, under Dr. Cameron. It extended on the right side of the neck from the median line in front to a point near the vertebral spine, and from the lobule of the ear to the clavicle. Was noticed two years and three months before, corresponding to the region of the right lobe of the thyroid gland. Caused little pain. Was somewhat lobulated, with prominent veins coursing over its surface. Fluctuation distinct. Measurement on tumor side of neck horizontally, $13\frac{1}{2}$ in. ; left side, 6 in. From lobule of ear on right side (over tumor) to outer extremity of the clavicle, 7 in. ; on left side, $2\frac{1}{2}$ in. Left pupil twice the size of right. Some dysphagia. Child died in July. The tumor was found in the *post mortem* to possess several processes ; but it had not infiltrated or eroded the surrounding tissues, a point to be considered in the diagnosis. There were secondary deposits in the lungs. The anatomical relations of the various structures adjacent were much altered. The large vessels on the tumor side were entirely obliterated. Those on the left side were enlarged. The processes spoken of were in the direction of least resistance. The muscular structures in the neighborhood were atrophied.

In the upper part of the tumor there was a predominance of fibrous tissue,

and septa of this tissue divided it off into lobules of spongy tissue. A peculiar condition was found in the spinal canal, the cord being surrounded below the dura mater by a mass of tissue, resembling in gross appearance the tumor growth, but it was not the same. It contained connective tissue corpuscles and nerve cells and fibres. Its nature Dr. Primrose had not yet made out. The tumor itself was examined microscopically, and proved to be sarcomatous. The beauty of Dr. Primrose's paper was that he had frozen transverse sections through the child which exemplified in a most splendid way his paper. The sections were much admired by the association. Photographs of the same were also presented for inspection.

Dr. Praeger spoke in high terms of the paper and the sections.

Dr. R. Ferguson, of London, then gave a report, and presented a recent successful case of cholecystotomy. The symptoms of gallstones in this case were for a long time obscure, the pain being referred to the epigastrium; no pruritus, feces lacking the characteristic color, and the absence of jaundice. Pulse and temperature remained normal. She had many attacks of pain, which were relieved by hot appliances and morphia. These paroxysms did not appear or disappear suddenly. Gastric ulcer, gastritis, and intestinal colic were excluded. Gastralgia was probable. Stomachic treatment gave no relief. The ordinary treatment for gallstones afforded no relief. But finally some of the typical symptoms of gallstones began to show themselves. Patient was transferred to the hospital with a view to operation. But, after lying quietly for two or three three weeks, she improved so much that she went home, operation being postponed. But she soon became worse. On one occasion she had felt, after a severe paroxysm of pain, a dropping of something in the region where the pain existed. Operation was gone on with. Eighty gallstones were removed. The edges of the incision of the gall bladder was sutured to the edges of the wound. A cough retarded the process of healing. Repair did not take place well. Suppuration set in. Parotitis in left gland set in; also a localized peritonitis. The attacks of pain returned. Dr. Ferguson then tried to insert a catheter through into the bile duct, which he thought he accomplished. The side of the catheter appeared to grate on some hard substance, but improvement took place, and patient returned home in ten and one-half weeks after the operation. But in four weeks the symptoms reappeared; pain very severe. Chloroform had to be administered constantly, as morphia seemed insufficient. She inhaled thirty-six ounces. Another operation was decided on. The incision was extended downwards $1\frac{1}{2}$ inches lower, allowing exploration with the finger in the region of the bladder. A body $2\frac{1}{2}$ inches long, one-eighth of an inch thick, was scooped out of the gall bladder. Its structure had

not been determined. The opening in the gall bladder was secured by a purse-string suture, and a drainage tube inserted into bladder. Patient made, although very nearly collapsed at the close of this operation, a good recovery. The pain in the second instance, the doctor thought, might have been due to the presence of the mucous cast (if such it was), which might have been forced out of the bile ducts into the bladder. The doctor's paper was valued highly. The patient was present, and the seat of operation exposed for operation. A small biliary fistula was still to be seen, but in other ways the patient seemed perfectly well.

Dr. Cameron, chairman of the section, asked why cholecystectomy might not be done in such cases rather than cholecystotomy.

Dr. Praeger had had a case where the pain was referred to the epigastric region. The doctor then outlined the case. It proved to be much like Dr. Ferguson's, only that the stones were in the duct, instead of in the bladder, and adherent to each other. In closing, the edges of the bladder were stitched to the sides of the wound. He was of the opinion that cholecystectomy should be preferred to cholecystotomy.

Dr. Meek had seen and helped with Dr. Ferguson's case, and agreed with him as to the causation of the recurrence of pain after the first operation. Dr. Meek cited another case in which the peculiarity was the immense dilatation of the bladder, one they had recently operated successfully upon. He was surprised to hear that Tait had adopted cholecystectomy instead of cholecystotomy.

Dr. Praeger told of a similar case he had to that of Dr. Meek; the bladder contained one and a half pints of bile and some forty stones.

Dr. Smith, of Fingal, then reported on Dr. Meek's last case, which was under his care. Patient was doing well. A point he dwelt on was that the temperature at the time of operating was 105°. In three hours it was normal, and had remained so.

Dr. Cameron then spoke of the propriety of removing the gall bladder. In cases especially where there was great distension and the presence of a number of stones that operation was preferable. There would thus be less danger to the peritoneum after the operation; the persistence of a biliary fistula is done away with. The bile, instead of escaping externally, should take its natural course and thus carry out its digestive function in the intestines. Dr. Cameron spoke of the administration of very large doses of glycerine, two or three ounces each hour of the paroxysm, for the relief of cases of gallstones. He supposed it acted by its hydrogogue effects—dehydrating, and thus relieving, the swollen mucous membrane. He had seen satisfactory results from its use.

Dr. Ferguson said he had tried equal parts of glycerine and succinate of iron (about half an ounce of glycerine) four times a day.

MEDICAL SECTION.

"Some of the uses of sulphurous acid" was the subject of a paper read by Dr. Arnott, of London. He began by saying that he had in his experience profited most by learning new applications of old remedies. Sulphurous acid was an old remedy. Homer spoke of its use in fumigation. The doctor spoke of its application in typhoid fever. It was particularly useful in that class (for he held typhoid had different causes) of typhoid due to "rapid multiplication of bacteria in the blood." The remedy should be freshly prepared and administered early in the disease. He would give from one-half dram to a dram every two hours, or even more, if the patient could stand it. With it he had not lost one percent. of his cases; and his patients, he said, were never given alcohol. To his mind, it was the remedy in typhoid. In early phthisis it was useful. It did not hurt the stomach. He had almost discarded the use of cod liver oil. It had been noted that consumptives who labored in sulphuric acid works improved in health.

Dr. Hodge presented three cases of Friedreich's ataxia in one family, two sisters and a brother. Father had eczema of legs so badly that he was obliged to use crutches; also had leucoderma of hands. A paternal uncle suffered from hemeralopia. These were the only neurotic points in the family history. The first, M.W., æt. 41, had a history of falling down stairs, having since then a weakness in the legs. Got worse since she was ten years of age. Now patient could not walk without support. Staggeres while standing, even with eyes open. Left alone, falls forward. Gait like one drunk. Leg muscles suffer only atrophy of disuse. Legs sensible to pain, touch, and temperature variation. Has pain now and then in right hip. Plantar reflexes normal; patellar increased. Feet in condition of talipes varus. Marked curvature of spine. Upper extremity normal. Pupils act normal. When she fixes to either side, there is marked horizontal nystagmus. Face not symmetrical; mouth drawn to left side. Tongue on protrusion turned to right, and exhibits fibrillar twitching. All senses normal. The second, Sarah, æt. 37, has suffered since she was 13, but nothing wrong with the gait till six years ago, at which time she received a hurt in the knee. Now she cannot walk without a cane. She would fall forwards if unsupported. In most respects she resembles her sister. Her speech is slow, and not very plain.

The brother, æt. 36. Feet began to deform at 15. When eyes were closed, he would fall backwards. Gait wide-legged and zigzag, and somewhat stamping. Lying down, he can do all the ordinary movements of the legs. In prominent symptoms, much like sisters. Right hand is claw-shaped. Atrophy of muscles of hands. Left hand somewhat affected, too. Curvature of spine. Suffers with excessive sweating.

Drs. Meyers, Macallum, Mills, Arnott, and Moorhouse took part in the discussion ; Dr. Hodge replying.

Dr. McKeough then followed by reading a paper on

PUERPERAL ECLAMPSIA.

In all cases the urine should be examined—more especially in primipara, who make up seven-eighths of the cases. Albuminuria, however, was not always followed by eclampsia. The prophylactic treatment should be directed to diet, and the use of eliminatives. Fluid diet, milk being best, should be recommended. Salines should be given to keep the bowels free; while for the skin nothing was so good as the daily hot baths for twenty minutes, the temperature on immersion being 99° , and gradually raised to 112° . Ice might be applied to head, and large quantities of water should be freely given the patient. If after this treatment the albuminuria is still present, labor should be induced. The process the reader of the paper then described. If any nervous symptoms showed themselves, chloroform should be administered. One should always keep in mind, in treating such cases, three points in the etiology—heightened vascular and nervous tension; the presence of some poison, probably from the kidneys, in the system; and the presence of the fetus *in utero*. If eclampsia comes on in spite of all previous treatment, the steps should be (1) sedative; (2) eliminative; and (3) induction of labor. The doctor referred to venesection. In certain plethoric cases it might prove useful. But in trying it as a last resort in two of his own cases, it did not save them. In fifty cases in Guy's Hospital in which it was performed, 30 per cent. died. Immediately after, in thirty-four cases where it was not used, 20½ per cent. died.

THURSDAY EVENING.

The report of the committee *re* interprovincial registration was presented by Dr. Praeger, in the absence of Dr. J. E. White, chairman of the committee. It proposed that a Dominion Medical Council be formed "to take general surveillance of the medical curriculum, and of all matters affecting the general public and profession of the whole Dominion," formed either by representatives (one each) from the members of the various provincial Medical Councils, or elected by the medical population of Canada irrespective of provincial lines; or on the "line of the British Medical Council." Its duties should be the equalization of the medical curriculum to a just and high standard; to secure interprovincial reciprocity; to have the power to withhold or take away a Dominion license from a provincial graduate for just cause; to approve all provincial examination papers before they were presented to candidates. There should only be one examination for the provincial and Dominion licenses, and extra fee for the latter. If it followed the British Medical Council in its formation,

the British Medical Council regulations should be operative as applicable to the Dominion. All men now on provincial registers to be entitled to Dominion registration within the year of the formation of the first Dominion Medical Council on payment of \$10. All practitioners outside of Canada and Great Britain would be allowed a Dominion license upon passing the prescribed examination. All those on the British register would be entitled to registration upon payment of \$25 as soon as Great Britain extended the same privilege to Canada. The committee further recommended that the association, through a committee, should present these views to the provincial councils, and by concerted action with them to apply at the next session of legislature for such permissive legislation as would be required to establish the powers and duties of the Dominion Medical Council. If any provincial council refused to accede to the demands of the general profession for these objects, that this association should instruct their delegates to go to the legislature of such province and secure the required concession.

Dr. Praeger moved its reception.

Dr. A. B. Macallum thought there were many difficulties in the way of bringing about the result desired in the report. The formation of a Dominion council as was recommended in the report would have to conflict with the various provincial legislatures which have under their control the subject of medical education. Such a council would be inert. One of the difficulties was that the graduates of universities in Quebec were granted licenses to practise, while this was not the case in Ontario. If such outside universities were granted such extended privileges, the institutions of Ontario, Manitoba, and the other provinces would be clamoring for their rights. Then, too, the courses of study in medicine in the various universities were much different. In Quebec, for instance, subjects were taken up which were regarded as foreign to medical education. Some of their universities demanded of the students a knowledge of Catholic history, metaphysics, etc., much to the dissatisfaction of the English minority. Dr. Macallum would strongly support a Dominion council, but one with powers considerably different from those outlined in the present report. A British medical council would answer our conditions far better than such a Dominion council as proposed. He suggested that representatives of all the various councils and universities of the Dominion and Britain form a council, and that they, after debate, recommend, after proper legislation, that the standard shall be raised in this or that subject of every province. Then it would be easy to have the desired reciprocity. The report presented was a most ill-digested one.

It was moved by Dr. Cameron, and seconded by Dr. Macallum, that the report be tabled. This carried.

Dr. Wesley Mills, of Montreal, then took up the subject,

PECULIAR FORMS OF SLEEP OR ALLIED CONDITIONS.

He gave a report of his observations of the *Arctomys monas* (woodchuck) during a period of five years, and more particularly during its season of hibernation. With the phenomena presented, he compared strikingly similar phenomena in two or three cases in human individuals. Some of the points were the periodicity of the attacks of stupor, abstinence of food and consequent emaciation, great slowing of respiration and circulation, the partial cessation of stupor to attend to urination and defecation, the tendency to increased reflex action. The professor's account of the lethargic condition in man was listened to with exceeding interest; the cases, some of them being authentic, having come under his own observation. The professor, as an evolutionist, contended that these tendencies were analogous to those in the lower animals, and inherited, so to speak, from them. Although Dr. Mills takes this advanced view, he says he is inclined less than ever to pooh-pooh what is said regarding trances and other similar popular notions.

Dr. A. B. Macallum, of Toronto, while admiring Dr. Mills' able paper very greatly, took some exception to his views. He contended that pathological conditions in the subjects whose cases were cited caused the lethargy; no such change in the brains of the lower animal, so far as he knew, took place. The subject, however, was one of extreme interest in connection with medical psychology—the question of the relationship of periods of lengthened sleep to mental disease. Dr. Mills would be prepared, he said, to believe in the Rip Van Winkle legend.

Dr. Cameron regretted that Dr. Mills had been obliged to omit the latter part of his paper, which dealt with the real nature of the hibernating and allied conditions. It would have been interesting to have heard a comparison between such various conditions as sleep, ordinary coma, the somnolent form of status epilepticus, etc. Regarding the pigmentary and fatty changes Dr. Mills spoke of, all were familiar. Dr. Cameron inclined to think it was a question of pathological chemistry rather than a gross pathological change.

Dr. H. A. Macallum gave Dr. Bucke's tide theory, that sleep was influenced by, or in the same manner as, the tides. The child's sleep corresponded to the two periods of rest between tides.

Dr. Mills, in replying, said that changes had been observed on examination of the brain cells of hibernating animals. He believed the object of the condition was for preservation of life. In winter, when it was difficult to get food, the woodchuck did with little or none. On account of his peculiar condition, inherited, no doubt, from his sluggish ancestors of ages ago, "Sleepy Joe" (one of the cases reported) found it agreeable to his constitution and economical to spend that portion of time when sustenance

was difficult to obtain and weather inclement in the lethargic state. Regarding the Rip Van Winkle story, he (Dr. Mills) thought it was like Shakespeare—a case in which the genius anticipated the science.

Dr. J. C. Myers, of Toronto, then read a paper on "Multiple Neuritis." He gave a brief history. Family history negative. Had for eleven years a suppurating knee; began from an injury. Always used to work. Two years ago had an attack of paralysis from exposure to cold; recovery in ten weeks. Present illness began in July last. Noticed first stiffness in right foot, which soon attacked the left; then went to the hand. The stiffness changed to paralysis, legs and forearms being involved. Took to bed. No pain or abnormal sensations. Complete paralysis of the flexors of the the ankles and extensors of the toes. Posterior tibial muscles weak. All forearm muscles affected, extensors most. Slight wasting of the affected muscles, particularly those of the thenar eminences of the hand. Marked hyperalgesia over the body. Tactile and temperature senses were exaggerated. Knee and elbow jerks lost, also skin reflexes. No paralysis of the ocular muscles. Disks normal. Health in other particulars good. Galvanic current shows A.C.C. is equal to K.C.C. From August 15th patient began to improve, and is continuing to do so. Power gradually returned; muscular nutrition increasing, and ability to walk returning, the walk being that of a "stepper." Myelitis was suggested as the diagnosis. This Dr. Myers negated by the distribution of the paralysis, integrity of the muscles, and absence of bladder and rectum symptoms. He diagnosed it multiple neuritis, with a favorable prognosis. Treatment: Salicylate of soda and warm baths; after a few days strychnine and other tonics, with massage and electricity, were given. The reader of the paper then gave a minute description of the pathological changes which take place in this disease—the parenchyma being almost alone affected. The nerves most often affected were the anterior tibial and musculo-spiral. It was caused, it seems, from a morbid state of the blood; this poison had a special affinity for nerve tissues. Modern pathology had enabled us to see that this was a separate disease from those with which it used often to be confounded, in which the lesions occurred in the central nervous system. Dr. Myers pointed out the various differences between such diseases and multiple neuritis, both as regards pathology and symptomatology.

OPHTHALMIC MEMORANDA

was the subject of Dr. A. Reeves' paper. He referred to the progress that had been made in ophthalmoscopy; also in the treatment of such affections as trachoma, lymphomata, astigmatism, stricture of the lachrymal duct, etc. The speaker outlined the present treatment for such affections, and methods of employing surgical therapeutics, where necessary. He discussed at some length the subject of sympathetic ophthalmia.

Dr. Osborne, in discussing the paper, spoke of the necessity of treating the nasal catarrh which was found in many cases of lachrymal duct affections. He also spoke of the great value of the ophthalmometer in astigmatism.

Dr. Reeves replied.

Dr. Harrison, the president-elect, was then voted into the chair. Votes of thanks were heartily given to the retiring president, the medical profession of London, and the railroads.

Dr. Anglin moved that the usual honorarium be given to the secretary. Carried.

Mr. J. H. Chapman, of Montreal, had an extensive and beautiful array of all kinds of surgical instruments on the platform, which were much admired between sessions by the members of the association.

Book Reviews.

THE RÔLE OF THE POSTERIOR URETHRA IN CHRONIC URETHRITIS. By Bransford Lewis, M.D., St. Louis. Reprinted from the New York *Medical Record*.

DISEASES OF THE SKIN. A manual for students and practitioners. By Charles C. Ransom, M.D., Assistant Dermatologist, Vanderbilt Clinic, New York. Students' Quiz Series. Philadelphia : Lea Brothers & Co.

A MANUAL OF MEDICAL TREATMENT or CLINICAL THERAPEUTICS. By J. Burney Yeo, M.D., F.R.C.P., Professor of Clinical Therapeutics in King's College, London, and Physician to King's College Hospital. With illustrations ; in two volumes, 630 and 740 pages. Philadelphia : Lea Brothers & Co., 1893.

A DICTIONARY OF MEDICAL SCIENCE. Containing a full explanation of the various subjects and terms of anatomy, physiology, medical chemistry, pharmacy, pharmacology, therapeutics, medicine, hygiene, dietetics, pathology, surgery, bacteriology, ophthalmology, otology, laryngology, dermatology, gynecology, obstetrics, pediatrics, medical jurisprudence, and dentistry, etc. By Robley Dunglison, M.D., LL.D., late Professor of Institutes of Medicine in the Jefferson Medical College, of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. New (21st) edition, thoroughly revised, greatly enlarged and improved, with the pronunciation, accentuation, and derivation of the terms. In one magnificent imperial octavo volume of 1181 pages. Cloth, \$7 ; leather, \$8. Philadelphia : Lea Brothers & Co., 1893.

TOOTH EXTRACTION. A manual of the proper mode of extracting teeth, with a table exhibiting, in parallel columns, the names of all the teeth, the instruments required for their extraction, and the most approved methods of using them. By John Gorham, M.R.C.S. London; Fellow of the Physiological Society of Guy's Hospital, etc. H. R. Lewis: 136 Gower St., W.C., London, 1893. Price, 1s. 6d.

The fact that this little work is in its fourth edition is a recommendation in itself as to its intrinsic value. The chapter on anesthetics is very weak, but the remainder of the little volume is well worthy of perusal.

It seems surprising, however, that in 1893 a writer should be found giving so much prominence to the old tooth-key as a means of extraction. For, though deprecating its general use on account of the unnecessary injury to the gums and adjacent parts, the author yet advocates it as the best instrument in certain cases. We would certainly not advise any student or general practitioner to invest in a tooth-key.

THE DISEASES OF THE NERVOUS SYSTEM. A text-book for physicians and students. By Ludwig Hirt, Professor at the University of Breslau. Translated with permission of the author by August Hoch, M.D., assisted by Frank R. Smith, A.M. (Cantab.), M.D., with an introduction by Wm. Osler, M.D., F.R.C.P. New York: D. Appleton & Co.

A work which has been highly recommended by Dr. Weir Mitchel, and introduced to the profession of this continent by Dr. Wm. Osler, does not need any special words of commendation from us.

The author divides the subject in a somewhat different manner from that ordinarily pursued. The diseases of the brain, spinal cord, and general nervous system are separately treated; the cranial nerves, for instance, are taken along with the brain, after the diseases of the membranes and before those of the brain proper. He divides the diseases of the general nervous system into two principal classes: those without any recognizable anatomical basis, and those with known gross lesions. In this latter class he places locomotor ataxia, a disease which is almost, if not always, placed along with the affections of the spinal cord. He is of opinion that this is warranted by the general character of the disease; the cerebral, spinal, and neural systems all being implicated. The lesions of the neural system have been described first by Turck, Friedreich, Westphal, and more recently by Déjerine and Pitres.

His remarks upon the causation of tabes will be of interest. He divides cases into two classes—non-syphilitic and syphilitic.

The non-syphilitic causes occur in those voluntarily predisposed to nervous affections, neurotic families, etc. Causes of direct hereditary character are very rare.

As exciting causes he mentions (1) exposure to cold; (2) traumatic influences; (3) over-exertion.

The merits of the work are briefly these:

- (1) Very lucid explanation of some of the more difficult points in the pathology of the nervous system.
- (2) Well-executed illustrations, many of which are original.
- (3) Very little of importance even of the most recent investigation has been omitted.

We can confidently recommend the work to students and practitioners who wish to obtain within a reasonable (about 650 pages) compass a thoroughly reliable work, and one containing all that is of much value in the literature of nervous diseases.

A NEW ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY, AND COLLATERAL SCIENCES.

Dr. George M. Gould, already well known as the editor of two small medical dictionaries, has now about ready an unabridged, exhaustive work of the same class, upon which he and a corps of able assistants have been uninterruptedly engaged for several years.

The feature that will attract immediate attention is the large number of fine illustrations that have been included, many of which—as, for instance, the series of over fifty of the bacteria—have been drawn and engraved especially for the work. Every scientific-minded physician will also be glad to have defined several thousand commonly used terms in biology, chemistry, etc.

The chief point, however, upon which the editor relies for the success of his book is the unique epitomization of old and new knowledge. It contains a far larger number of words than any other one-volume medical lexicon. It is a new book, not a revision of the older volume. The pronunciation, etymology, definition, illustration, and logical groupings of each word are given. There has never been such a gathering of new words from the living literature of the day. It is especially rich in tabular matter, a method of presentation that focuses, as it were, a whole subject so as to be understood at a glance.

The latest method of spelling certain terms, as adopted by various scientific bodies and authorities, have all been included, as well as those words classed as obsolete by some editors, but still used largely in the literature of to-day, and the omission of which in any work aiming to be complete would make it unreliable as an exhaustive work of reference.

The publishers announce that, notwithstanding the large outlay necessary to its production on such an elaborate plan, the price will be no higher than that of the usual medical text-book.

Medical Items.

DR. W. A. YOUNG has been appointed a coroner for the city of Toronto.

DR. OLIVER WENDELL HOLMES was eighty-four years of age on the 29th of August, when he was enjoying good health.

DR. J. EDGAR has been temporarily appointed superintendent of the Hamilton Hospital in the place of Dr. Olmsted, resigned.

DRS. B. E. MCKENZIE and FREDERICK WINNETT have been added to the staff of demonstrators of Anatomy in the Medical Faculty of the University of Toronto.

DR. HUGO TOEPPEN, who graduated in the University of Toronto, 1892, is practising in St. Louis, Missouri. He has been appointed Professor of Histology in the Beaumont Hospital Medical College of that city.

DR. L. F. BARKER (Tor. '90) is still living in the Johns Hopkins Hospital, Baltimore. He paid a short visit to his friends in Toronto and Whitby in September, but returned to Baltimore, where he expects to continue his work in bacteriology and pathology for another year.

DRS. CHARLES TEMPLE and D. A. ROSE have been added to the staff of demonstrators of Anatomy in Trinity Medical College. Dr. Anderson has been appointed demonstrator in Pathology, Dr. Pepler assistant in Pathology, and Dr. Fenton assistant in Histology in the same institution.

DR. JOHN STEWART, of Pictou, N.S., visited Toronto in the first week of October, and was present at the opening exercises of the Medical Faculty of the University of Toronto. He is much pleased with the decision of the Canadian Medical Association to meet in St. John next year, and is very anxious to have a large representation from this part of the country.

DR. PRAEGER, of Nanaimo, B.C., has become one of the most faithful attendants at the meetings of the Canadian Medical Association. He has made many friends in this part of Canada, who were pleased to see him again at the London meeting. A member who travels from two to three thousand miles to attend the meetings of the association deserves about the best treatment his brethren can give him.

DR. INGERSOLL OLMSTED, who has been medical superintendent of the General Hospital in Hamilton for the last three years, has resigned his position in that institution, and will go to Philadelphia, where he will act as assistant lecturer in bacteriology in the University of Pennsylvania. Dr. Olmsted's resignation caused universal regret in Hamilton, and the city council presented him with an engrossed address, which contained kindly expressions in reference to his future success.

ABOUT October 15th a medical directory of the State of Connecticut will be issued by the Danbury Medical Printing Company, of Danbury, Conn. It will contain a list of all the medical practitioners of the state, the various medical societies, all the dentists and dental societies, druggist and pharmaceutical societies, nurses and training schools for nurses, hospitals, etc. Price \$1, delivered free by post.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.—The next regular meeting of this very prosperous association will be held in New Orleans, Nov. 14th, 15th, and 16th. We are instructed by the able and worthy secretary, Dr. W. E. B. Davis, of Birmingham, Alabama, to say that members of the medical profession from all sections are cordially invited to attend. We can assure our readers that any Canadians who may have the good fortune to be able to attend the meeting will receive a very warm and cordial welcome from our generous brothers in the "Sunny South."

TORONTO AT THE CANADIAN MEDICAL ASSOCIATION MEETING.—It has been remarked somewhat frequently in recent years that Toronto physicians do not take sufficient interest in the meetings of the Canadian Medical Association. This year the president, Dr. Sheard, did his duty in asking his brethren of the city to support him in making the meeting a success. We were very glad indeed to see so large a representation from Toronto—twenty-eight in number. If there were any grounds for complaints concerning our apathy respecting former meetings, it is satisfactory that they did not exist in connection with the London meeting.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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Original Communications.

RETROSPECT, ASPECT, AND PROSPECT IN MEDICAL SCIENCE.

BY PROF. A. B. MACALLUM.

(Continued from page 732, October issue.)

WE have had with us from time immemorial that disease, tuberculosis, of which annually more people die in America alone than of cholera in the whole world. It is indeed the scourge of the race. When cholera threatens to invade us we become vastly alarmed, and every agency employable by the state for that purpose is utilized to prevent its advent, while we regard with apathy the ravages of tuberculosis, on the plea that nothing can be done. Although it is a disease that is on the increase, and although its causation was definitely determined over eleven years ago, no civilized government has, so far as I am aware, directly encouraged any research with the object of finding a cure, preventing its spread, or stamping it out altogether. Had scientific facts indicated it to be incurable, we might have an excuse for our apathy; but facts point in the contrary direction, and show that a number recover on hygienic treatment alone. When I say that no government has favored research in tuberculosis, I

omitted to mention that the national government of the United States has, through its Bureau of Animal Industry, taken up the question of tuberculosis in cattle. That does not need any comment.

Why should not tuberculosis, typhoid fever, diphtheria, scarlet fever, and other zymotic diseases be the subjects of research carried on under state control and by state aid? When the state institutes investigations into hog cholera and cattle plagues, surely it ought to do no less for diseases of the human subject. It is true that the state has attempted to extend its functions in the direction of the prevention of disease through its sanitary officials; but so long as the number of deaths per annum preventable by ordinary means is more than two thousand for every million of people, it is evident that the state has not done its duty fully.

It is interesting to compare the aid extended by the public to theological and technical education with that granted, for the same purpose, to medicine. According to Dr. Gould, the editor of the Philadelphia *Medical News*, there is, in the United States, a sum of between seventeen and eighteen millions of dollars invested in theological education, while there is less than half a million invested in medical education. In Ontario, according to the estimates I have in hand, the figures are, respectively, \$2,100,000 and \$85,000. The amount invested in technical education in the United States it is difficult to estimate, but is undoubtedly a vast sum. In this province the amount given to aid agricultural and mechanical instruction and civil engineering reaches the neighborhood of \$300,000, and this from the state. It may be urged that whatever is given to hospitals should be considered under the head of medical education; but if it could be shown that they always serve that purpose, the contention would be, in some respects, a valid one. But who will contend that this very indirect aid, if it is that, is the equivalent of that granted to instruction in mining, mechanical and civil engineering, and to agricultural education? When millions are given voluntarily by the people to the support of instruction in the various denominational theologies, the state ought surely to presume to give a fraction of such a sum to aid that which is, in the language of the Marquis of Salisbury, "the most sober, the most absolute, the most positive of all the sciences."

Now, let us turn from the dark to the bright side of this picture. What of the future? I have already pointed out how all the sciences which lie at the foundation of medicine have progressed during the last thirty years, and I have stated that the present abundance of publications containing original observations on subjects within the provinces of these sciences indicates that a host of enthusiastic workers are directing their energies to problems, the solution of some of which would be of inestimable importance to the welfare of mankind. Just as it has been in the

past thirty years, so in the coming generation will there be a steady increase in all our knowledge along this line. Indeed, within the next ten years some subjects, as, *e.g.*, bacteriology, as it is now understood, will be worked out—that is, we will know the substantially important facts connected with it—and there will remain questions of minor importance only to be solved. But bacteriology in a sense other than that commonly received is destined to be a subject of vast importance in the prevention of disease. I mean the biology of bacteria in its widest sense, embracing not only, as it does now, the determination of species, their external forms, their conditions of occurrence, and the effect of their presence in organisms, but also, and this more especially, their physiological chemistry. It is in physiological chemistry, in all its extent, that we are to find the study of the future. In this subject physiology, pathology, and bacteriology, as it will be, will be one. Physiology, in its departments of digestion, absorption, secretion, and nutrition, is now simply physiological chemistry; and when we analyze the functions of the specialized organs of the body, and find how these depend on nutrition as well as on specialization of structure, we can determine how great a part in physiology the chemistry of the cell and tissue plays. Pathology, in the sense in which we now use it, is quite as much interested, if not more so, in the advances made in physiological chemistry, for not only are a large number of diseases merely derangements of nutrition, but the phenomena of zymotic diseases are referable to the products of decomposition caused by bacteria in the organism. This study of physiological chemistry in its broader aspect has already begun. Bacteriologists are now engaged in the investigation, on the one hand, of the chemical products of the growth of bacteria, and, on the other, of the proteid compounds in the animal body which annihilate micro-organisms or prevent their growth. Pathologists have commenced the study of the chemistry of the tissues in disease. But most busy of all has been the physiological chemist himself. The researches on the proteids alone during the past three years might be considered as epoch-making, showing, as they do, how crude was our knowledge on many points connected with these. There is, indeed, a life's work in these for many an investigator in the future. That the phenomena of life occur in a complexity of proteids shows how far-reaching any important addition to our knowledge of them may be.

To physiological chemistry, then, belongs the future. Closely related as it is to physiology, pathology, bacteriology, and general biology, it will tend to overshadow these, and the number of its students will be greatly reinforced from the ranks of those endowed with scientific curiosity, for, in one of its branches, that of the physiology and chemistry of the cell, a subject now developing into prominence, the investigator stands face to

face with the mother of mysteries, and there is no student who would not give a lifetime of work to be able to lift a corner of the veil to behold her features.

In therapeutics, physiological chemistry will be a modifying factor. At present we search the whole earth through for drugs to add to our list, and we discover new ones in our laboratory. Those that we take ready-made from nature, as, for example, quinin, digitalin, etc., are, for the most part, excreted products of vegetable metabolism, whose presence and retention in the vegetable cell, like that of the nitrogenous products in the animal body, are injurious to life. In other words, we use the excreta or by-products of one kingdom to irritate or stimulate the organism in the other. Unless we believe that Providence ordained that vegetable organisms should produce such compounds to touch with exactness the springs of life within us, we may be excused from considering many of them as permanently placed in our pharmacopeia. Were all the therapeutists of the present day to search for a drug which would benefit cases of pancreatic diabetes, would they ever find one which would replace exactly that physiological compound whose absence in disease of the pancreas is the cause of the appearance of sugar in the blood? Is it possible to find a by-product of vegetable metabolism which will replace, when the thyroid gland is diseased or atrophied, that physiological compound whose formation and presence in the normal thyroid gland prevents that deposition of mucin in the body which characterizes the disease myxedema? These facts and the possible advances in our knowledge of physiological chemistry suggest how transient is the present character of our pharmacopeia. At the present day we indulgently smile when an old wife gives a child a dose of castor oil or calomel for toothache, knowing how very indirectly the toothache is alleviated, if at all; but what a large number of drugs must we employ whose action, contrary to what we suppose, may be as indirect as that of calomel in toothache!

Apart from this, and from the crudities at present exhibited in the administration of the so-called animal extracts, physiological chemistry is destined to be a very important factor in the treatment of bacterial diseases. It is now known that some animals do not take certain diseases because of the presence in their blood of proteids which destroy or prevent the growth of the bacteria causing those diseases. Hankin has investigated some of these proteids, and found that they belong to the class called nucleo-albumins. Vaughan and McClintock have determined that they are nucleins. The nucleins and nucleo-albumins have been but little studied, but that they are a very important class of compounds is rendered apparent also by the extreme probability that the digestive and other ferments belong to that class. Kossel advances the view that the

animal organization defends itself against the poisonous proteids formed or secreted by bacteria through the nucleinic acid of the organism uniting with the toxic compound and thereby rendering it insoluble. If, as some physiological chemists maintain, the nucleins can be formed out of simpler elements in the laboratory, and if, further, a very large number of them exist, their employment in the future as therapeutical reagents may serve to prevent or alleviate many diseases due to micro-organisms.

One may not hope for the extinction of disease. It will be present as long as life exists on this earth. Medicine has prolonged the average length of life by over three years, but it has also succeeded in bringing to maturity very many of the less robust, who, under the severer conditions which once obtained, would have succumbed. These are an easy prey, not only to bacterial, but also to functional diseases. The latter will always be with us, whether we have the other or not. The more medicine is perfected, the more of the less robust are saved to swell more and more the list of those who constantly require medical aid. The physically strong will not require it less than they do now, for, so long as human nature is what it is, it will sin as readily against physiological as against moral law. It is in the prevention of disease that progress ought to be made. I have already stated that there are over two thousand preventable deaths per annum in every million of inhabitants. To stop this waste of life—and stopped it ought to be—entails the prevention of a much greater amount of disease, because for every preventable death there are several cases of preventable disease. If the public could be convinced that tuberculosis could be made less prevalent, it would so act that probably another two thousand deaths would be prevented. To accomplish this, the state must teach sanitary science, not only to medical students, but to the whole people.

In the next thirty-five years, then, we will have a thorough knowledge of bacteria, of the compounds which they secrete or form during their growth, of the substances formed by them which are injurious to animal life, and of the compounds formed by the animal organism for self-defence. We will probably be able to assist nature, in some instances, at least, by adding to the supply of defensive material. We will have solved many of the problems of nutrition, while knowing more about others than we do now, and, as a consequence, our knowledge and treatment of disease will be far in advance of what it is at present. Of all this progress we can be certain, as it depends on forces now operating and increasing in strength as the years go by. It may be precipitated in the scientific world by any important increase in number of scientific investigators in medical science, in which case the rate of progress will be greater than I have attempted to outline.

What is the bearing of all this on the student's career? It is quite evident that if he rests content with the minimum of attainments demanded by a curriculum he will fail to achieve solid success in the future, when the physician must be more scientific than he is now; and, if he is intelligently ambitious, he will exercise his foresight by giving to the sciences of his course that full attention which they require of him in order to prepare him for all the possibilities of a medical career. He must lay the foundations well and surely in his work in the laboratories, and he must be constantly, year by year, building on the foundation with such material as the times give. It is true that to know all the sciences thoroughly is impossible to any one, however brilliant he may be, and that, with the time at the disposal of the student, a complete familiarity with the sciences may not be expected of him.

He may, however, by concentrated industry, acquire a knowledge of general biology, physiology, chemistry, pathology, and bacteriology, which will be of immense service to him. It is often stated that the student cannot gain a competent knowledge of these subjects in the four or five years of the course. Does he get a competent knowledge of medicine and surgery before he graduates, and is his development in these subjects arrested when he receives his license to practise? If not, why should it be different in the case of the sciences? Should he not carry on the study of these sciences in post-graduate years? When the scientific specialist or the medical man urges that there is no opportunity for getting more than a smattering of the sciences, he forgets that the student of the present day travels a much less rugged road than *he* did. If you ask any old practitioner about the facilities for anatomy in his student days, he will describe a condition of affairs that will, perhaps, be unintelligible to you who are aware of our splendid anatomical equipment and methods for teaching anatomy. In my time, as a student, and that was not long ago, the arrangements for learning anatomy, good as they were then, were far behind what they are now. In instruction in physiology ten years ago, no experiments were performed, and there were no demonstrations for the student. In pathology and bacteriology, in former years, it was seldom that a student had an opportunity for practical work. All that is changed. We have less of the fearful grinding out of lectures, and we make the student control all he reads by work in the laboratory. It appears to me that he is in a much better position to acquire the knowledge demanded by the curriculum than he was ten years ago. He does, indeed, what he did not do to any great extent in his undergraduate course then. The laboratory work compels him to observe and note, a feature of his training that was formerly developed at the bedside—a good place, indeed, for observation,

but a bad one for commencing the training of it. Dr. Billings says that of the vast literature on medicine much of it is worthless, much of it is suggestive, and only one per cent., perhaps, of it is valuable. That, if correct, can be explained in only one way—and that is, that the contributors to this literature, who are amongst the best and most progressive of the profession, are fearfully deficient in capacity for observation. What is responsible for this but the old-time methods under which the student was trained? The student of the present day has, indeed, everything in his favor, and he ought to cultivate to the full every opportunity which our modern methods of teaching offer him. He ought to study the sciences not simply for the purpose of passing examinations in them, but to avoid being an empiric in after years. The latter is one who relies on his own experience, or on that of others, without having therefor a scientific explanation. Empirics are not at all rare at the present day, and they usually style themselves "practical" men. As such, they are related, perhaps distantly, to the old "yarb" * woman who relies on her limited experience, and on nothing else. It is the fashion of this class to exalt the professional and deride the scientific subjects as if they were distinct and opposed. A physician whose training in the sciences may be very limited may, indeed, avoid empiricism by constantly examining and proving the phenomena of disease which present themselves; but how laborious such a process must be to him, and how much more practical is he who recognizes that the scientific and professional subjects of medicine are inseparable.

It is maintained that the medical profession is overcrowded. It is claimed by some that twenty thousand practitioners in the United States could be very well replaced by a thousand well-educated and well-trained ones. It is certainly not wanting in numbers in Great Britain, France, and Germany, and we are familiar with the statement that there are quite enough in Canada. Those who are already in it must have a greater professional experience than the student can get by close attention to professional requirements alone, valuable as these are; and if he neglects the sciences on which they are based when he gets a license to practise medicine, he is one more in the struggling mass, with no more moral right to succeed than the average man. The profession is not overcrowded to those who patiently and steadily train themselves in all the parts that distinguish a scientific practitioner of medicine. There cannot readily be too many of such, and if the student determines to be one of these, and carries out his determination, his future is assured.

* "For in all times, in the opinion of the multitude, witches, and old women, and impostors have had a competition with physicians. And what followeth? Even this: that physicians say to themselves, as Solomon expresseth it upon an higher occasion: 'If it befalleth to me as befalleth to the fools, why should I labor to be more wise?'"—*Bacon, "Advancement of Learning."*

A few years ago, a physician considered himself equipped for clinical work if he had a stethoscope, a few test tubes, with a spirit lamp, and perhaps an ophthalmoscope. At the present day, to be prepared for all cases, he must have a variety of instruments, the proper use of which requires a careful training in the laboratory, and also a very fair knowledge of physiology, physiological chemistry, and bacteriology. Some diseases may be and are diagnosed by the use of these instruments alone, or by methods taught in the laboratory, while in the diagnosis of other diseases these instruments and these methods furnish a very great assistance. Those who have examined the history of the past in medicine will agree with me when I say that the methods of diagnosis in the future will require a greater scientific knowledge than is even now the case.

To the student himself I would say, Cultivate the sciences which lie at the foundation of medicine, for they are to be the key to you that will unlock the treasure-house of the future. They will give to you that sense of satisfaction that arises out of your knowing that you are in the van with progress. Not any the less thereby, but rather the more fitted will you be for professional work when you enter upon it. For this cultivation there is abundance of opportunities in your undergraduate course and, indeed, the Medical Council has, with a wise foresight, provided that you may pass the fifth year of your course in laboratory work wholly. If, on the other hand, you neglect the sciences, you will be hampered in the appreciation of your work, and the exigencies of a practice will prevent you from overtaking the arrears of knowledge due to that neglect. You may then fully realize your mistake, when regret is of no avail to repair it.

No one, I believe, esteems more highly than I do professional attainments and skill. Nor do I deride experience, for it is not that which makes you satisfied with what has been done, but rather that which stimulates your desire to know more. Perhaps the best view of experience is that given by Tennyson in his poem, "Ulysses." The old hero, who had gone unwillingly with the Greek host, has, after ten long years before Troy and ten years of peril and adventure on the sea, returned to Ithaca, and he is represented as resolving to take up once more the life of change and discovery. I quote one familiar passage because it describes my ideal of the scientific spirit, whether it is to be found in the laboratory or at the bedside, and because it gives to the student of to-day a glimpse of the life that may be his in after years :

" I am a part of all that I have met ;
Yet all experience is an arch where through
Gleams that untravelled world whose margin fades
Forever and forever when I move.
How dull it were to pause, to make an end,

To rust unburnished, not to shine in use !
 As tho' to breathe were life ! Life piled on life
 Were all too little, and of one to me
 Little remains ; but every hour is saved
 From that eternal silence, something more,
 A bringer of new things ; and vile it were
 For some three suns to store and hoard myself,
 And this gray spirit yearning in desire
 To follow knowledge, like a sinking star,
 Beyond the utmost bound of human thought."

THE MEANING OF VITAL MOVEMENTS.*

BY H. A. McCALLUM, M.D.,

Professor of Physiology, Lecturer on Clinical Medicine, Western University,
 LONDON, ONT.

MY intentions are to show that a basic relation exists between all vital movements, to indicate the meaning of hypertrophy and broken compensation, and to point out that all motion has defensive intention. The somewhat dogmatic style of the paper, the failure to state fully the methods of investigation, and the negligence to present all the data in the premises from which the conclusions have been drawn, will doubtless be subjects of criticism ; but these defects have arisen from stern attempts at brevity.

If you examine the subject of biology for the faculties by which protoplasm was enabled to survive the ascent to the higher animal, and by which our present grade of higher animal protoplasm became the survival of the fittest, you will doubtless have vital movement and immunity in your list of findings.

Vital movement in offensive media only, by means of which the animal life was enabled to migrate into purer media, or expel the offensive surroundings, can scarcely be disputed to be the chief factor in this survival. By long submersion in offensive media, the ability to develop tolerance or the so-called immunity would be another of these faculties. The first of these qualities implies the power of relaxation as well as contraction, and the former is as necessary to undergo vital movements as the latter. All grades of protoplasm not so behaving would likely perish. So that our present grade of higher animal protoplasm from hereditary tint would be thrown into active movements by offensive or toxic surroundings ; and this I wish to show is the basic explanation of all motion.

*Read before the Canada Medical Association, London, September, 1893.

The lymph surrounding the muscle fibre is offensive to its protoplasm, and the contraction which occurs is with the object of expelling it and obtaining a purer media. We term lymph offensive when there is a change in the chemical composition, temperature, or pressure, which, when increased, leads to the death of cell protoplasm. Examination of the phenomena of contraction in voluntary muscle discloses (Foster, vol. i., page 125) that the impulse coming down the motor nerve produces a carbohydrate explosion, setting free carbonic acid, lactic acid, etc., changing the muscle from an alkaline to an acid reaction before any contraction has taken place (in the latent period). The construction we place on this is that the contraction which follows on this explosion is with the purpose of expelling the resulting offensive lymph. Physiologists are agreed that these products fatigue and even produce the death of the fibre if not removed, and Foster says "the explosion gives rise to the visible contraction." Ludwig says that even passive motions of a limb will greatly increase the lymph flowing from that limb. If contraction expels large quantities of lymph from a muscle, relaxation must extract equal quantities from the blood. It must follow, therefore, that the number and vigor of contractions of a muscle are a measure of the amount of lymph passing through it. If suitable time is allowed between each contraction to allow the nutritive particles to be assimilated by the muscle protoplasm, a high state of nutrition must attend this phenomenon. The hypertrophy that follows on training of voluntary muscles results from the large quantity of nutritive fluid made to pass through the muscles.

It will not be disputed that venous blood, or the blood of asphyxia, induces contraction of involuntary muscle; the lymph obtained from the blood surcharged with waste products is the stimulus. The contraction is purposeful, viz., to expel the offending lymph from the adjacent vicinity. The waste products may be so plentiful that voluntary muscles take part in this phenomenon.

Examination of motion in the uterus, intestines, spleen, ureters, scrotum, bladder, etc., will show that involuntary muscle fibre throughout the body undergoes rhythmic contractions with intervening relaxations—strongly resembling the long-drawn-out beats of a tardily beating heart (see Foster, vol. iv., p. 1539). The meaning we attach to this phenomenon is that these rhythmic contractions are induced by lymph surrounding the muscle fibre becoming offensive. The rhythmic contractions of these tissues appear to represent the homologue of the lymph hearts of the amphibia.

Lymph may be rich in nutritive material, yet offensive, and this is the secret of the occurrence of hypertrophy in involuntary muscle. The uterus may be taken to illustrate this position. This organ undergoes

rhythmic contractions that become so well marked in the last months of pregnancy. They are not peculiar to the pregnant state, however, and have been seen to occur in a uterus wholly removed from the body. The interval between each contraction shortens as pregnancy advances, and the organ itself enlarges or hypertrophies as gestation proceeds. Two things keep pace with the increase in waste products of the child, viz., the speed of the contractions and the hypertrophy of the uterus. The hypertrophy is evidently due to the increasing quantity of lymph made to pass through the organ, and this is effected by the frequent extraction during relaxation after "hardening." Hypertrophy is therefore due, indirectly, to the offensive lymph. This position is strengthened by the relation subinvolution and hyperplasia bear to septic infection, endometritis, lacerated cervix, etc. The increased growth of the child, by increasing the pressure of the lymph in the lymph spaces of the organ, may be a factor in this intermittent hardening, but it must not be forgotten that the vital movement may take the form of relaxation to avoid this offence. This faculty of relaxation appears to take place from the fibre becoming tolerant to pressure—so to speak, immuned to this offence. The relaxation phenomenon appears to give the uterus the accommodating faculty for the fetus.

Labor is the outcome of a failure on the part of the uterus to properly expel its offensive lymph without ending gestation from the violence of its intermittent contractions. Pregnancy, therefore, resolves itself into (in many cases) a capability of the pelvic lymph system. These contractions would doubtless be inaugurated by that part of the uterus corresponding to the placental attachment being the situation of maximum offence. A contraction wave (which is induced by one fibre in contraction raising suddenly the pressure in the lymph of adjoining fibres; one fibre after another, finding the increased pressure offensive, falls into contraction) passes over the entire organ. The return of the uterine body to smaller dimensions after delivery is due to a want of its former contraction stimulus. The relation of heat and cold as causes of offence in the lymph of the whole or part of the organ needs no attention.

I desire to direct attention to some interesting relations this theory bears to cardiac physiology and pathology. Howell and Cook (*Journal of Physiology*, vol. xiv., p. 198) show that the heart beat is not inaugurated by an "organic diet." Their conclusions offer no contradiction to the position taken in this paper; indeed, the results obtained from their extensive series of experiments become intelligent under our meaning of motion. Our meaning of motion teaches that the heart beat is inaugurated by the offensive lymph surrounding the muscle fibres. Starting at a delicate point like the sinus venosus (speaking now of the isolated heart), the con-

traction wave, which is induced similarly to that seen in the uterus, sweeps over the entire heart. The theory of one fibre becoming negative to its neighbor could possibly be interpreted as offence, but the offending pressure can fully explain away the difficulty in understanding the contraction wave. This view is supported by the peristaltic motion seen in the intestines, ureters, scrotum, etc., and indirectly by the arrest of this wave by ligatures, etc. If the wave were induced by electrical variation, it would probably conduct itself past ligatures, etc.

The theory that the cardiac beat is inaugurated by offence is supported by the increased speed that occurs in conditions of asphyxia, toxemia, etc. What inaugurates the rhythmical respiratory movements but offensive lymph in the respiratory nerve centres! This, and the fact that the very causes which will increase the depth and speed of respiratory movements acts apparently similarly on the heart, point out that the respiratory stimulus is also a cardiac one.

Cardiac hypertrophy is induced by increased quantities of lymph travelling through this organ. Hypertrophy is called forth by those very conditions which would furnish offensive lymph. The offensive lymph in renal disease, by stimulating to contraction the body tissues (like the muscular coats of the arteries), increase the blood pressure; and, in this way, aid in inducing hypertrophy. The most probable cause of this hypertrophy, however, is the direct action of the offensive lymph on the heart muscle itself. There arrives a time in this hypertrophy when one of two things occurs: Either relaxation becomes greater than normal, and there is only left elasticity to restrain dilatation (and this is damaged, doubtless, before this stage is reached); or, by the long submersion of the cardiac protoplasm in this offensive (increasing) lymph, a condition of toleration is developed. By these results, "broken compensation" follows on cardiac hypertrophy. Immunity, therefore, plays a part in producing somatic death.

Before-closing, I might mention that motion is not confined to muscular tissue; it is agreed that here we merely have its most definite examples. Those causes, therefore, which induce motion in the muscular tissues act similarly, though to a less degree, on other tissues. This view of motion, and the theory that the tissues extract their own lymph from the blood, are opposed to the "endothelial secretion theory" of Heidenham and Sterling; but, since I am answering their position elsewhere, it is unnecessary to touch in this paper on the many objections which vitiate their conclusions.

By granting the ability to the tissues of securing their own lymph, inflammation becomes simply excessive extraction action of the tissues themselves.

Motion, therefore, is nature's most effective defensive agency.

415 Dundas Street, London.

Selected Articles.

REMARKS ON PRE-VESICAL INFLAMMATION.*

BY PAUL THORNDIKE, M.D.,
BOSTON.

SINCE Retzius, a Swedish anatomist, published a paper in 1858 describing in detail the anatomy of the lower abdominal wall and pre-vesical space, many cases of inflammation in this region have been reported; and many articles have been written, chiefly by French authors, with a view to explaining the pathology of these inflammations and tabulating our knowledge of the subject, including the cases reported.

The writer has recently had the privilege of examining a case of inflammation in this region occurring in the service of Drs. Bradford and Post, at the Boston City Hospital, and has been interested to look up the present-day knowledge on the subject. A résumé of this knowledge, apparently, does not exist in English, and it is hoped that the present one may prove of use to some of us.

The pre-vesical space, often called the cavity of Retzius, is a shallow space entirely external to the peritoneum, and serves in part to give the bladder room in which to expand when filled with urine. It is bounded anteriorly by the pubes and the anterior layer of the transversalis fascia of Cooper, and behind by the bladder and by the posterior layer of this same fascia. The part of the space which extends upward beyond the pubes is limited above the line of union of the two layers of fascia which are given off at the lower border of the sheath of the recti muscles posteriorly, and has for its side limits the union of these layers with the aponeurosis of the transversalis and the oblique muscles. Below, the space is limited by the prostatic sheath and the superior aponeurosis of the true pelvis, so that pus in this space can get back to the rectum and to the iliac fossæ on either side of it.

Now, let me see if I can make this a little clearer. It will be remembered that the sheath which covers the recti muscles of the abdomen on their posterior surface does not extend all the way down to the pubes, but ceases at a point between the umbilicus and pubes, and ends in a

*Read at annual meeting of the American Association of Genito-Urinary Surgeons, at Harrogate, Tenn., June 14th, 1893.

crescentic border which the French writers call the "semicircular fold of Douglas." This leaves the lower part of the posterior surface of the recti muscles without a sheath. From this lower crescentic edge of the sheath two thin layers of fascia are continued. The anterior one, which is very thin indeed, covers the lower posterior surface of the recti muscles, left uncovered by their own sheath, and attaches itself to the symphysis. The posterior of the two layers extends down behind the bladder to join the pelvis fascia. These two layers of fascia are merged at the sides into the edge of the aponeurosis of the transversalis and oblique muscles. It is evident that there are two distinct spaces in this region: First, A submuscular space just behind the lower part of the recti muscles and shut off from the pre-vesical space proper by the thin anterior layer of fascia; and, second, the pre-vesical space itself, shut in above between the two layers of fascia, and below between the anterior bladder wall and the symphysis pubis.*

Enough has been written about the anatomy of the so-called space of Retzius to create a very general interest in the pathology of the region; and cases of many different kinds have been reported as instances of pre-vesical abscess. Various different schemes for arranging these cases have been suggested, so that from the writings on the subject it is difficult to get an idea of what is meant by a case of pre-vesical abscess.

As may be supposed, suppuration in this region occurs as a result of traumatism (operative or otherwise), as a result of disease in neighboring organs, such as the bladder, prostate, uterus, etc.; and even a gonorrhea has been the direct cause of pre-vesical suppuration in one or more instances, as a result of metastasis in pyemia or typhoid fever. In other words, we may have an inflammatory process in this region, as in most other parts of the body, from very many different causes.

A study of reports shows that when all such cases have been eliminated there still remains a number which have apparently no such reason for their existence. In other words, as far as our present knowledge goes, there are idiopathic pre-vesical abscesses. Englisch, of Vienna, has studied and tabulated the cases of this sort which he was able to find, and published his tables in two articles (1889 and 1891). He finds in literature twenty-three cases of so-called idiopathic pre-vesical inflammation, and adds ten more from his own experience.

In none of these could any possible cause for the inflammation be assigned. He thinks that all other cases may be conveniently classed under three headings: (1) Those caused by traumatism; (2) those caused

*I purposely refrain from further anatomical detail as to the boundaries, etc., of these spaces, as the points mentioned are all that seem necessary for clearness, and I believe they are all proven by many careful dissections made at different times by several anatomists (notably Retzius and Hyatt). The descriptions of them date back to the early years of this century.

by metastasis; and (3) those caused by direct extension from neighboring organs or tissues. Let us leave these cases for brief consideration later, and look first at the idiopathic form of inflammation, as these cases are by far the most interesting ones for us, inasmuch as we are still in ignorance of their cause.

Although there have been a few chronic cases of pre-vesical inflammation in which there were no apparent symptoms until the appearance of the tumor, still in most cases the illness begins with symptoms of severe gastric and bowel disturbance. There is usually constipation accompanied by colicky pain and vomiting, these symptoms being sometimes so severe as to cause a considerable degree of collapse. The constipation shortly gives place to a persistent diarrhea, which is accompanied by loss of appetite and a general feeling of discomfort and uneasiness. These symptoms, referable to the stomach and bowels, are of sufficient severity to send the patient to bed. Within two weeks, and generally within a few days, from the beginning of the illness, the pain, which may have been the only symptom, up to this time, which in any way localized the disturbance, and which may have been present either as a dull, heavy feeling in the lower abdomen or as a sharper pain in the pre-vesical region, becomes more severe and more sharply localized, the fever is more marked, and a tumor manifests itself above the symphysis, generally symmetrical in shape, and looking very much like a full bladder. The catheter demonstrates an empty bladder, and the diagnosis is made if one has followed the previous history of the case. The tumor may be rather asymmetrical in shape, owing, no doubt, to the more rapid spread of the inflammatory process on one side than on the other, but it is usually symmetrical and its upper border is flat and sharply defined, so that the tumor is commonly described as being triangular in shape, with the base of the triangle upwards and the point disappearing behind the symphysis pubis. Examination by rectum, or in women by vagina, will not, as a rule, demonstrate the presence of any swelling, unless the trouble has been present for some time. Occasionally, the downward extension of the inflammation can be felt in this way. Disturbance of micturition is almost the rule in these cases, as one would expect, and yet a few cases are recorded where the micturition was so nearly normal as to be scarcely an inconvenience, while in one case there was no such disturbance at all. Complete retention is not common, the disturbance being generally a constant vesical tenesmus, with frequent and somewhat difficult micturition. The urine itself is generally normal, although in cases of long standing a cystitis more or less severe is apt to develop, with its attendant changes in the urine.

The inflammatory process terminates either in resolution, or more

commonly in suppuration. If the trouble subsides without suppuration, the further history of the case is simply a gradual diminution in the severity of all symptoms, so that at the end of five or six weeks no trouble remains, and physical examination reveals nothing except perhaps a little induration in the anterior abdominal wall, or, as felt per rectum, at the base of the bladder in the neighborhood of the prostate and seminal vesicles. These areas of induration may remain unresolved for months, and if present at the base of the bladder may give rise to further disturbance of micturition.

If the process ends in suppuration, the beginning of pus formation is indicated by a sudden increase in the pain and fever, with perhaps a well-marked chill. The trouble with micturition may also increase in severity; and in some cases an edema of the skin just above the pubes appears, and may be the first indication of abscess formation. The abscess may break through its walls and carry the inflammation into any of the surrounding tissues or organs.

Most commonly, it makes its way through the anterior abdominal wall and appears close under the skin, as a rule in or near the median line, the pus pointing in two places in some cases.

The pus may work down to the front of the thigh through the inguinal opening; it may break into the bladder, urethra, rectum, or vagina; or it may perforate the peritoneum and get into the peritoneal cavity. Several cases of fecal fistula are reported, the bowel wall having tied itself down to the wall of the cavity by adhesions, and then the perforation taking place. This complication may render the diagnosis very difficult, as in the case which the writer examined at the Boston City Hospital, in which such a fistula existed. This case, although one of pre-vesical suppuration, is not reported in detail because its history shows conclusively that the pre-vesical abscess was merely an extension downward of an inflammation which began higher up in the abdominal wall, probably as an extravasation of blood in the right rectus muscle which was the nucleus of an abscess which broke through into the pre-vesical space.

The prognosis in these cases is not necessarily a bad one, as is commonly stated. Out of thirty-three cases collected by Englisch, including ten of his own, there were but four deaths, and in these four cases the abscess broke through into the peritoneal cavity and the patient died of a purulent peritonitis in each instance. In but one of these four cases was any attempt made to liberate the pent-up pus by operation. This one was undoubtedly of tubercular origin. Of these thirty-three cases of idiopathic pre-vesical inflammation (and I have been unable to find any others recorded), fourteen subsided without operation or any but symptomatic treatment; seven were incised and slowly recovered; and the

other twelve opened themselves spontaneously, four through the anterior abdominal wall, two into the rectum, two into the bladder or urethra, and four into the peritoneal cavity (one of these in spite of the fact that a vent for the pus had already been provided by an operation).

The cause of these inflammations is at present unknown to us, and we are not in a position to make any assertions with regard to it. Many surgeons believe that the process is a tubercular one, but there seems to be no proof of this at present beyond the fact that a goodly percentage, perhaps about thirty per cent. of the cases, have a tubercular history, either personal or family. As for the treatment, it should be symptomatic and antiphlogistic until pus demonstrates its presence, and then the sooner an incision is made the better. In women the attempt has been made once or twice to drain these abscesses through the vagina, but the cases have proved troublesome, and the suprapubic incision seems to be the best means for drainage at our disposal. An early incision is advisable, of course, in view of the fact that twelve per cent. of these cases have died from a purulent peritonitis resulting from perforation.

The question of a laparotomy for the relief of a peritonitis following perforation was not considered in any of these four cases.

Besides the class of cases just described, there are many reported instances of pre-vesical suppuration, similar in history to those already mentioned; but in all of them some very evident cause has been apparent. All have been either a result of external traumatism, or dependent upon pathological conditions of neighboring organs. The cases which are directly attributed to external violence are few in number, and in them the injuries received have varied so much in kind and in severity that but little can be done in the way of classifying them or making deductions from them. Among the accidents resulting in pre-vesical suppuration may be mentioned a fall upon the abdomen from a horse; rupture of the gravid uterus during labor as a result of attempted version; rupture of the full bladder; suprapubic puncture of the bladder in a case of retention of urine; goring by the horns of a cow; gunshot wound of the pelvis with the bullet imbedded somewhere in this region. In this last case a fall served as the immediate cause of the inflammation, which resulted in the formation of the abscess about the bullet after it had been in the pelvis for six years. Some of these traumatic cases have started as extravasations of blood, and some have been purulent inflammations of the pre-vesical connective tissue. The cases run about the same course as the so-called idiopathic ones, and among the few which proved fatal were those of ruptured uterus, ruptured bladder, and the suprapubic vesical puncture. In the first two of these there was a large extravasation of blood into the pre-vesical space.

Whether some of the traumatic cases start *in* the abdominal wall and break into the pre-vesical space or not, it is impossible to say. A very small number (3 or 4) of cases are recorded where a pre-vesical inflammation appeared in the course of a typhoid fever. They may have started as blood extravasations in the recti muscles, due to diseased vessel walls, and then may have broken through the thin anterior layer of the transversalis fascia into the pre-vesical cavity. Of the three cases of which I have records, two recovered and one died from peritonitis following perforation into the general peritoneal cavity. It is suggested by several writers that pre-vesical abscesses probably do occur occasionally as metastases in pyemia just as do peri-urethral abscesses. I have not found a report of any such case.

There still remain for mention the cases of pre-vesical inflammation which are direct extensions of pathological processes in neighboring organs or tissues. Most of these occur in the male in the course of some vesical, prostatic, or urethral trouble. Occasionally they follow uterine or peri-uterine inflammations. Cases of this sort are reported following chronic cystitis with and without the presence of calculi in the bladder; perforation of a bladder which contained a stone; stricture of the urethra; gonorrhea and various forms of pelvic inflammation in the female. One case is recorded where the phlegmon followed an abscess in the joint at the symphysis pubis, which came on after a labor. Another very curious case is that of an inflammation of the umbilical veins in a newly-born infant, followed by a pre-vesical abscess and death on the thirteenth day. The autopsy showed all the pelvic organs healthy, but a purulent thrombosis of the umbilical vein. Still another interesting case is reported by Guyon, in which the autopsy, made five weeks after an internal urethrotomy for stricture, showed an abscess of the prostate, a perforation at the neck of the bladder into the pre-vesical space, and a large pre-vesical abscess. Of twenty-four cases tabulated by Englisch (of course by no means all that there are recorded), eight died ($33\frac{1}{3}$ per cent.); but the cases resulted from such a variety of causes, and the accompanying conditions were so different in different instances, that these deaths must not be ascribed to the pre-vesical abscess itself, which in some of these cases was only an incident.

To sum up, then: There are a large number of reported cases of undoubted pre-vesical inflammation, of which rather less than half subside without suppuration, and rather more than half result in abscess formations. Many of these cases occur as a direct extension of an inflammatory process from neighboring organs, chiefly the bladder, prostate, and urethra. A few occur as a result of traumatism, and an occasional one is metastatic.

The remaining cases may be classed at present as idiopathic cases. These have been carefully studied by Englisch, who reports thirty-three as follows: Thirty-three cases with four deaths ($12\frac{1}{2}$ per cent.), all from a general purulent peritonitis following perforation of the abscess into the peritoneal cavity. Of these thirty-three cases,

- 14 subsided without operation and without spontaneous opening.
- 7 were incised and slowly recovered.
- 12 opened spontaneously.
- 4 through the anterior abdominal wall.
- 2 into the rectum.
- 2 in the bladder or urethra, and
- 4 into the peritoneal cavity.

It is believed by many surgeons, though without proof, so far as the writer is aware, that these abscesses are of tubercular origin. Of Englisch's 10 cases (from his personal experience), 4 had tubercular histories.

The prognosis is not necessarily unfavorable, as is commonly stated, for of the 33 idiopathic cases but 4 died (12 per cent.), and, of these 4, all died from a perforation into the general peritoneal cavity, and in only one of these 4 cases was an attempt made to liberate the pent-up pus by operation.—*Journal of Cutaneous and Genito-Urinary Diseases.*

(ABSTRACT.)

THE WORK OF A PHYSICIAN.*

BY SIR JAMES CRICHTON-BROWNE, M.D., LL.D., F.R.S.

WORK has always been recommended as a shelter from the anguish of the spirit. "*Cultivons notre jardin*" was the advice of Voltaire. "Toil, young men, toil," cries Zola. "I beseech you, put your trust and your faith in your work. I am a witness," he goes on, "to its marvellously soothing effects upon the soul. How often, in the morning, have I taken my place at my table, my head, so to say, lost, my mouth bitter, my mind tortured by some terrible suffering, and every time, in spite of the feelings of rebellion after the first minutes of agony, my task proved a balm and consolation."

To you, gentlemen—and I am now speaking to the students of the Sheffield Medical School—toil, abundance of toil, will not be wanting. In your time of pupillage you will have to toil manfully to surmount suc-

*Conclusion of address on "Biology and Ethics," delivered at the opening of the Sheffield Medical School, and published in the *Quarterly Medical Journal* for Yorkshire and adjoining counties.

cessfully the mountains of examination that lie before you ; and in your professional pilgrimage you will have to toil patiently to perform your duty in the state to which you are called, and your work will always yield you a rich return, if not of lucre, yet of satisfaction. But I fervently trust that your work will always be performed with a higher motive than that which M. Zola indicates. Relief your work will bring you if you are suffering ; but you will have comparatively little suffering to require relief if you undertake your work, not as a personal pick-me-up, but for the public benefit. Toil, young men, toil, I would say, not because your work is a "sweet, oblivious antidote" to yourselves, but because it carries assuagement to your suffering fellow-creatures ; not for the apotheosis of anaesthesia, but for a quickened vision of life. Toil to make a beneficent use of your attainments, to perfect your own powers, to do credit to your profession, to serve your country, and to ward off from your race any degeneracy with which it may be threatened. A wide and promising field stretches out before you ; for to the medical toilers of the future will be given more and more power, not only to restore and prop up bent and cankered stems, but to shield the whole crop from blight, and forward its lusty growth. Plants of prey—for so we may call the fission fungi—will be hunted down as beasts of prey have been ; sanitary science will promote the reign of health, and mental and moral hygiene will perhaps reconcile natural and ethical evolution.

But while you toil and toil diligently, and with noble aims, rest too, and rest diligently, and with set purpose, for rest, no less than toil, is necessary to happiness. Your professional experience will teach you the dangers of immoderacy, and show you crowds

"Of mortals on the earth who do become
Old in their youth and die ere middle age,
Some perishing of pleasure, some of study,
Some worn with toil, some of mere weariness,
And some of withered and of broken hearts."

Your professional experience will convince you that toil and rest must alternate if the one is to be productive and the other restorative, and there is assuredly, at the present time, room for the redistribution of toil and rest, or labor and leisure. There are some amongst us who have too much leisure, and who would be all the better for a little more labor ; there are many amongst us who have too much labor, and would be greatly benefited by a little more leisure. Do not, however, run away with the notion that those who have too much leisure have the best of it, for leisure in itself is not good or profitable, but only as a relief from labor, and as affording the opportunity of varying it. There are few more wretched beings than those whose lives are all leisure, who have never learned to

labor and to love labor, and who have not the resolution to devise labor for themselves, but lead an inane and vapid existence—long nights of sleep, long days of drowsiness, days in which dinner is the central event, contemplated beforehand, lovingly dwelt on, and ruminated on afterwards. This way madness lies; nay, rather imbecility—drivelling imbecility.

Too much labor makes a man hard and brittle. Too much leisure leaves him soft and spongy. It is in the just balance of these that the true temper of manhood is to be found.

When I began this address I proposed to myself to sketch, for the benefit of the younger brethren assembled here, an outline of medical ethics, or the code which should regulate the conduct of the medical man in the several relationships in which he is professionally placed; but my theme has run away with me, and I now find that the large hand of the clock has gone round the dial while my preamble has crowded out my clauses, so that medical ethics must stand adjourned. Let me just say, however, that the rules, traditions, and laws of etiquette to which the members of the medical profession owe allegiance seem to me to require revision from time to time, to adapt them to the ever-changing conditions of modern life. Fixed and immutable as regards the principles on which they are founded—principles of justice, honor, truth, and good feeling—they are yet, as regards some of their practical applications, susceptible of amendment now and again as circumstances alter. And, indeed, insensibly and without formal legislation by any professional parliament, or judgment by any professional tribunal, they do alter as the years roll on. The explanatory candor and winning suavity of our *fin de siècle* physician in his dealings with his patients is as different from the rigid reserve and verbal mystification of the physician of a century ago as is skirt-dancing from the *minuet de la cour*. And, in the matter of advertising, or the means used to make known professional qualifications or pretensions, there has been, in recent years, a distinct change in our notions of what is and is not legitimate. No doubt in certain directions some relaxation of old customs and opinions regulating professional conduct and intercourse is desirable; but, on the whole, it would seem that some stiffening of professional sentiment is what is most needed. Rivalry is more intense than ever it was before, and the success that attends the rampant and devouring quackery by which we are surrounded tempts struggling men to stoop to the arts by which quackery secures its ill-gotten gains. The *Times* said truly, the other day, that “a medical practitioner who discovered a means of preventing diphtheria would for a time be talked about and admired by the public, but they would leave him to starve, while they would hasten to pour gold into the lap of any impostor who proclaimed loudly enough that he had invented a pill which would cure it.” The vast majority of the

medical profession is, I would maintain, notwithstanding discreditable cases that are sometimes brought to light, and even the medicated wine scandal, well able to withstand the seductions of charlatanry, and, sound in conscience, to pursue the path of rectitude without monitions or fear of penalties. But for the weaker brethren—and there are weaker brethren in all professions—a code of honor supplemental to the general ethical code is an admirable tonic. And, indeed, for the profession as a whole, such a code has its value, raises the standard of work, and exalts the sense of duty. The sustaining influence of a code of professional honor, in moments of supreme trial, was brilliantly illustrated in the charge of Balaclava, and in the wreck of the "Victoria," only three months ago, when bands of men were dauntless, steadfast, and heroic, standing face to face with sudden death; and the same influence is, less conspicuously, but not less truly, manifested in the self-denying devotion with which medical men carry on daily their incessant guerilla warfare with disease. The moral qualities displayed by the profession should, I think, be its charter to public esteem, and protect it from the humiliation which the present widespread patronage of quackery really amounts to. For quackery is patronized in high places, and is supported not only by the dull and ignorant, but by the presumably educated and intelligent. It flourishes, no doubt, in our great manufacturing towns like Sheffield, but the very hotbeds of it are our fashionable watering places and health resorts, and I am assured that, while our skilled artisans are least of all given to quackery, our learned clerics are most addicted to it. Well, I think our learned clerics should seriously reflect that, in giving countenance to the nostrums of the empiric, they exhibit a credulity and superstition that must seriously impair their usefulness in their sacred calling with all thoughtful men. Great may be the faith, but small must be the wisdom, of the man who believes he derives benefit from a non-electric belt! What exegetical insight is possible in him who swallows patent pills? They should remember—these learned clerics—the commendation of the Bereans, and search the scriptures—the scriptures of science and common sense—to see whether these things be so.

Above and beyond, however, any special code of honor appertaining to the medical profession, there is the general code of ethics to which that and all professions are amenable, and, as regards that general code, I would say that medical practice is daily demonstrating to those engaged in it its reasonableness and wisdom. To those who faithfully pursue it, medical practice affords an ethical training and discipline of the best kind; it opens a refuge from pessimism in the opportunities it gives for the relief of sorrow and suffering; it unveils, in the tender ministrations of the sick room, some token of the angel as plainly as competition discloses

vestiges of the tiger and the ape, and it fosters that wide sympathy that yields hope for the future of our race. "The man shall die," said David, not because he did this wrong, but "because he had no pity." Surely one of the most moving of texts is this: "He had compassion on the multitude," which, translated into my native language as it has been by Scott Riddell, becomes even more expressive in the words, "He was wae for the folk." To bread-winning industry, to an honorable ambition, the medical man must add compassion for the multitude if he would make his work fruitful to his patients, to the public, and to himself.

(*ABSTRACT.*)

AUSCULTATION OF THE LIVER.

BY DR. R. B. NEVITT.

(Translated from an article by Piazza Martini in *Clinica Medica.*)

THE normal respiratory and cardiac sounds are not rarely transmitted and heard over the hepatic area. Pathological murmurs are also frequently transmitted from the heart. Friction sounds may be heard and felt, due to rubbing of the opposed liver and peritoneal surfaces, roughened by inflammatory deposit, or from neoplastic nodules, or from inflammatory products about the gall bladder. A peculiar metallic rustling may be heard when the bladder contains a number of calculi.

Auscultation combined with percussion should be made between the anterior axillary line and the mid-clavicular line, prolonged to the end of the costal arch for the right lobe, and into the epigastric fossa for the left lobe. The percussion note elicited is very high-pitched for the liver; the note over the heart, spleen, and kidneys is lower; that over the lungs very much lower in tone. Care should be taken in percussing not to strike over the ribs. In this way the hepatic area can be differentiated from an infiltrated and hepatized lung, and from a pleural effusion. Visceral tumors can be defined with great exactness by this method, and abscess in the abdominal walls over the liver gives a very distinct note to that over the hepatic area.

When palpation and percussion cannot be practised or are indefinite, the lower margin of the liver may be defined by auscultating the patient in the sitting or supine position; then, placing the end of the stethoscope over the heart's apex, follow the sounds along the thoracic lines, the mid-axillary, mid-clavicular, and over the liver. The heart sounds will be clearly transmitted over the liver substance, ceasing to be heard exactly at

the lower border of the liver. Murmurs may be heard on auscultating the liver generated *in loco*, or transmitted from the abdominal vessels, or from compression or aneurism of the hepatic vessels. Arterial blowing murmurs may be heard in biliary colic from lithiasis, and, though very variable in doubtful cases, may be confirmatory. It is stronger in the accesses of pain, less intense when the pain ceases, and disappears altogether after the expulsion of the calculi. The presence of such a murmur in cases of biliary colic, when medical resources are exhausted, might urge the surgeon to operate. It is true such a murmur may be caused by carcinomatous enlargement of glands in the hilum of the liver, by aneurism of the hepatic artery, or by an echinococcus cyst of the inferior surface of the gland. The differentiation is made by the history, the objective examination, and the mode of onset of the symptoms. Venous murmurs may be heard, due to displacement of the liver, and consequent interference with the blood current through the inferior cava.

When the cavity of an hepatic abscess communicates with the bronchi or with the intestine, various sounds may be heard, due to the presence of gas in the cavity.

A NEW SIGN IN THE DIAGNOSIS OF TYPHOID FEVER.

In all cases of typhoid fever, in which he had an opportunity of observing during the two last big epidemics at Odessa, Dr. V. Filipovitch found a sign as yet not pointed out, which he has called the "palmo-plantar sign." This sign consists of callous condition of the palmar and plantar epithelium, along with a yellow coloration, which is sometimes orange or saffron-like, and this on the elevated portions of the palms and soles. In healthy subjects these are more or less rosy; in the cyanosed they become bluish.

He attributes this to a weak heart action, an incomplete filling of the capillaries, and to the dryness of the skin in typhoid cases.

Since this sign was so constantly present, Dr. Filipovitch looks on it as a possible pathognomonic sign of typhoid, which might be useful in diagnosis in the earlier stages of the disease.

Dr. A. Skibnevsky, another Russian physician, was able to confirm this observation during an epidemic of typhoid which broke out in the district of Moscow.

This sign disappears rapidly after convalescence sets in.—*La Revue Médicale*, August, 1893.

J.A.A.

Progress of Medicine.

MEDICINE

IN CHARGE OF

W. P. CAVEN, M.B. Tor.,

Lecturer in Clinical Medicine in the University of Toronto; Physician to
Home for Incurables.

THE BACILLUS OF LOEFFLER IN THE PHARYNX AFTER DIPHTHERIA.

Tobiesen (*Centralblatt f. Bakteriologie*, 1892, p. 587) publishes a study upon this interesting point. He states that the bacillus has been found in the throat after the fall of the membrane as long as six weeks by Roux and Yersin and by Ritter. He himself has frequently found it on the fourth, fifth, and sixth day, and in one case on the tenth, twenty-second, and thirty-first day after the fall of the membrane. The frequency of the bacillus under these conditions has no connection with the gravity of the case. Concerning the influence of complications in favoring the continued existence of the bacillus croup seems doubtful, but diphtheritic coryza certainly does favor it. Among nineteen guinea-pig inoculations with the bacillus thus derived, sixteen animals died within twenty-four to fifty hours, and the three remaining ones had either necrosis or paralysis. The natural conclusion of this study is that diphtheria patients, after leaving the hospital, are very liable to communicate the disease to others. As a matter of fact, upon following up such patients returning home carrying the bacillus in the secretions of the mouth, Tobiesen has been able to find but one case of the disease, and that one doubtfully, to be referred to such a source of contagion.—*American Journal of the Medical Sciences*.

PULMONARY ABSCESS; INCISION; RECOVERY.

Fairchild (*Chicago Clinical Review*, vol. ii., No. 23, p. 118) has reported the case of a miller, fifty-five years old, in which, after convalescence from an attack of pneumonia had apparently been established, febrile symptoms returned, with chills and cough and the expectoration of a small amount of extremely offensive matter, suggesting the existence of gangrene of the lung. Despite faithful stimulating and supporting treatment, the condition of the man grew steadily worse. The heart was found slightly displaced to the right. The pulmonary percussion resonance was found to be somewhat impaired anteriorly (it is not indicated upon which side, however) and the respiratory murmur enfeebled, while posteriorly the percussion note was absolutely dull, and the breath sounds could not be

heard at all. Change of posture occasioned no change in the physical signs. It was concluded that a pulmonary abscess existed, and operation was determined upon. After several unsuccessful punctures, the aspirating needle was introduced into the fifth intercostal space just anteriorly to the angle of the ribs, and a free flow of pus followed. With the needle as a guide, ample incision was made, and, as the ribs were too close to permit of a satisfactory entrance into the chest, the lower portion of the fifth rib was resected for a distance of about two inches. The visceral and parietal layers of the pleura were found adherent; so that, after a passageway had been made by means of the fingers, a dressing forceps was introduced, the blades widely separated, and about ten ounces of pus permitted to escape. A large perforated rubber drainage tube was introduced to the bottom of the abscess, and secured to the external wound by a suture. The cavity was thoroughly irrigated with a solution of boric acid, until the fluid returned clear. Iodoform gauze was loosely packed around the tube, and a generous dressing of borated gauze applied. The patient reacted well from the anesthetic and the operation. The dressings were for a time changed daily, the discharge of pus gradually lessening. Cough and expectoration soon ceased. At the end of a year the patient was perfectly well.—*American Journal of the Medical Sciences.*

THE DIAGNOSIS OF HYSTERIA.

Charcot has shown that hysteria is a definite neurosis with readily recognizable symptoms—hysterical stigmata, divisible into psychical and somatic. The manifestations of hysteria may be paroxysmal, but the stigmata are found between the attacks. The history of a fit is valuable evidence, but fits may be entirely absent in most serious forms of hysteria.

Psychical stigmata. The mental characteristic is impressionability, as evidenced by frequent alteration in disposition, habits, emotions, etc.; the characteristic fit—headache, palpitation, globus, etc.—ending with sighs, tears, or laughter; the hysterical often appear untruthful and vicious because they suffer from gaps in memory; they may forget all the events of a certain period; they are liable to vivid dreams, visions, etc. The existence of hysteria does not predispose to crime; neurasthenia and hereditary mental degeneration are not part of hysteria—they are added to and complicate it, and their presence is diagnosed by their own characteristic stigmata. By congenital deformities, asymmetry of skull, face, palate, etc., hypospadias, cryptorchismus in cases of hereditary degeneration. By the characteristic cerebral symptoms—headache with constriction aggravated by effort, tinnitus, intellectual asthenia, defective

accommodation, vertigo, character morose, irritable, and introspective, and spinal symptoms—weakness and aching pains in the legs, indigestion, palpitation—in neurasthenia.

Somatic stigmata. Anesthesias, hyperesthesias. The less valuable and constant phenomena of (1) diathesis of contracture, l'état d'opportunité de contracture (Charcot), (2) amyosthenia, and (3) tremor.

The anesthesia may be total, but is more usually incomplete, as analgesia, thermoanesthesia, anesthesia and thermoesthesia, electro-anesthesia, or anesthesia and electroesthesia.

The left side is more frequently affected (3 to 1); therefore it is well to begin an examination on that side. Distribution may be (1) general, (2) hemi-anesthesia, (3 and 4) anesthesia in islets or in geometrical areas. They do not follow the distribution of the nerves to the anesthetic areas. The superficial reflexes are usually abolished; the knee jerks present, often exaggerated. Certain organic reflexes are frequently preserved; "goose skin," and the "tache cerebrale" may be produced. Anesthesias of the mucous membranes of the conjunctiva, tongue, fauces, pharynx, epiglottis are frequent.

Special sense derangements. Restriction of the visual field is almost constant. Color blindness is common in hysterical women, rare in men. Red vision is usually preserved after all other colors, and is outside instead of inside in the perimetric tracing.

Hyperesthesias also may be general, unilateral, geometrical, or irregular in distribution. They may be found around a joint or an eye, and may be associated there with rigidity of joint or blepharospasm. Pressure of hyperesthetic zones may excite convulsive manifestations (hysterogenic) or restrain them (hysterofrenic).

Diathesis of contracture betrays itself in an abnormal irritability of muscle, contraction on tapping, supervention of rigidity, etc.

Amyosthenia, weakness of grasp, is very common. Hysterical tremor exists in many forms.—*R. T. Glynn, in Liverpool Med. and Chir. Journal.*

SPASTIC PARAPLEGIA.

"A contribution to the study of the family form of spastic paraplegia" appears in the *American Journal of the Medical Sciences*, April, 1893. This contribution is based on the observation of two families. In the first a brother and sister were affected with spastic paraplegia, and a first cousin suffered from bilateral spastic hemiplegia; in all three cases the affection was marked in early infancy. Several other members of the family presented a marked *increase of reflexes*.

The mother of the first two children presented exaggerated tendon reflexes. The grandmother had been almost deaf from childhood ; her speech was abnormal ; she was able to write, and was fond of reading, but was described as mentally deficient. Her physical development was good. The grandfather was married twice ; in none of the descendants of the second wife were spastic rigidity and increased reflexes found.

In the second family, out of eight children living, three brothers present well-marked paraplegia, and the remainder all have very active reflexes and some rigidity of muscles. There is no proof of the direct hereditary transmission of a neurotic tendency in this family. At the birth of three children instruments were used and labor was prolonged, but in the other cases delivery was easy. All the children were born at term. In view of the etiology of these cases, their multiple occurrence in each of these families is a fact of much interest. The cause of the disease has been deemed to be external—abnormal parturition, difficult labor, premature birth, asphyxia neonatorum—but in a large number of cases perfectly healthy children are affected without any assignable cause ; in the first family there was no trouble at the birth of either child. Hence the author concludes that it is evident from the history of these two families that spastic paraplegia may occur as a family disease due to a congenital tendency, and appear either in infancy, during childhood, or in adult life. It may be assumed that the complications and the difference in the age at onset correspond to variations in the extent and nature of the morbid process.—*Medical Chronicle*.

TRUE AND FALSE ANGINA PECTORIS.

Dr. Huchard gives the following table of differential diagnosis between true angina and hysterical pseudo-angina :

<i>True Angina.</i>	<i>Hysterical Pseudo-Angina.</i>
Most common between forty and fifty years.	At every age, even six years.
Most common in men. Attacks brought on by exertion.	Most common in women. Attacks spontaneous.
Attacks rarely periodical or nocturnal.	Often periodical and nocturnal.
Not associated with other symptoms.	Associated with nervous symptoms.
Vaso-motor form rare. Agonizing pain, and sensation of compression by a vice.	Vaso-motor form common. Pain less severe. Sensation of distension.
Pain generally short duration ; attitude, silence ; immobility.	Pain lasts one or two hours ; agitation and activity.
<i>Lesion.</i> Sclerosis of coronary artery.	Neuralgia of nerves.
<i>Prognosis.</i> Grave, often fatal.	Never fatal.

Huchard also discusses the prognosis of angina : Sudden death may occur during the course or at the end of a painful paroxysm, or by sudden

syncope unattended by pain. Anginal patients are very liable to syncope; the patient falls as if struck by lightning. In other cases death is not so sudden, but rapid, and may be attended with symptoms of asphyxia instead of syncope. In other cases the disease may be terminated by intercurrent affections. The predisposing causes of sudden arrest of the heart in angina are probably lesions of the cardiac ganglia and local ischemia of the myocardium; the exciting causes are spasmodic contraction, or thrombosis of the coronary arteries. The author gives iodide of potash for three or four years in doses of forty-five to sixty grains daily, taking care to suspend it for eight or ten days each month. In rheumatic cases, sodium salicylate, rest, even temperature, and dietetic care are always important. The inhalation of nitrite of amyl (this drug relaxes the peripheral arterioles, lowers the blood pressure, and relieves the heart). Nitro-glycerine and hypodermic injection of morphia are also useful for the same purpose, and act much in the same way. Hot applications to the chest, faradization of the cardiac region, with internal administration of diffusible stimulants, belladonna, and small doses of opium have been recommended.—*Hospital Gazette*.

THE TREATMENT OF ASTHMA.

M. J. P. Nuel (*Bulletin de l'Académie Royal de Médecine de Belgique*) recognizes in the filaments described by Curschmann, in 1882, an important factor in the causation of bronchial asthma. Believing that these filaments, in the case of the eye, have their origin in a retarded elimination of corneal epithelium with a tendency to the formation of mucus, and noting that a two per cent. solution of chloride of ammonium favored this elimination and liquefied the mucus, he believes that the same remedy would benefit the bronchial asthmas, and this belief has been confirmed by the marked success attained by Dr. Delbovier.—*American Journal of the Medical Sciences*.

CARDIAC IRREGULARITY IN RHINO-PHARYNGEAL DISEASE.

In a paper upon "Irregular Heart," Dr. Sansom (*The Lancet*, 1892, No. 3616) presented some illustrative cases tending to show that a reflex from the rhino-pharyngeal tract and from the neighborhood of the auditory mechanism was often a potent cause of cardiac irregularity. He thought that the nasal and aural troubles were the commonest reflexes which started the cardiac derangement. Dr. Woakes testified that heart perturbation or cardialgia was a common consequent on nasal disease.—*American Journal of the Medical Sciences*.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

SALICYLIC ACID FOR TENIA.

Make the patient fast the entire day. At night give thirty grammes of castor oil. The following morning at 7 o'clock give fifteen grammes of oil, and at 8, 9, 10, 11, and 12, one gramme of salicylic acid—in all, five grammes; then fifteen grammes of castor oil. Recommended by Ozegowski.
—*Qaceta Médica de Catalana*. R.B.N.

OINTMENT FOR SCABIES.

Creolin 2 grammes.

Vaselin 40 grammes.

Apply freely to the affected parts every day. Four days suffice for a cure. Creolin is rapid in action, unirritative, and innocuous. The entire body may be covered with it without inconvenience.—*Qaceta Médica de Catalana*. R.B.N.

TO MASK THE TASTE OF DISAGREEABLE DRUGS.

It has happened to all at some time to have tried to mask the disagreeable taste of medicines with concentrated essences, pill and capsule, glycerine and saccharine. Nowadays the gustatory sensitiveness is benumbed by special substances. Amongst these a certain reputation has been achieved by gimnesic acid, extracted by Hooker from the *Asclepias gimnema*. It is a greenish white powder of harsh taste, soluble in alcohol. By covering the tongue with this powder the perception of sweet and bitter disappears for some hours, whilst that for harsh, disagreeable, sour, and sharp savors remains. When a bitter medicine is to be taken, paint the tongue with a twelve per cent. alcoholic solution of the acid.

The same thing occurs with eugenolacetic acid, a new anesthetic, which, applied to the tongue in the form of a fine powder, renders the part in contact insensitive for a variable length of time.—*La Cronica Médica*.

R.B.N.

NIGHT AIR.

Before we can hope to fight consumption with any chance of success, we have first to get rid of the night-air superstition. Like the dread of

cold water, raw fruit, etc., it is founded on mistrust of our instincts. It is probably the most prolific single cause of impaired health, even among the civilized nations of our enlightened age, though its absurdity rivals the grossest delusions of the witchcraft era. The subjection of holy reason to hearsays could hardly go further. "Beware of the night wind; be sure to close your windows after dark!" In other words, "Beware of God's free air; be sure to infect your lungs with the stagnant, azotized, and offensive atmosphere of your bedroom!" In other words, "Beware of the rock-spring; stick to sewage!" Is night air injurious? Since the day of creation that air has been breathed with impunity by millions of different animals—tender, delicate creatures, some of them—fawns, lambs, and young birds. The moist night air of the tropical forests is breathed with impunity by our next relatives, the anthropoid apes—the same apes that soon perish with consumption in the close, though generally well-warmed, atmosphere of our northern menageries. Thousands of soldiers, hunters, and lumbermen sleep every night in tents and open sheds without the least injurious consequences. Men in the last stage of consumption have recovered by adopting a semi-savage mode of life, and camping out-doors in all but the stormiest nights. Is it the draught you fear or the contrast of temperature? Blacksmiths and railroad conductors seem to thrive under such influences.—*Good Health*.

NEW PROPERTIES AND USES OF SALOL.

M. Reynier (*Gazette des Hôpitaux*) read to the Société de Chirurgie some notes on salol. At a temperature of 40° C. (104° F.), salol fuses and becomes liquid; it can then be easily injected with a Pravaz syringe. The liquefaction persists for fifteen or twenty minutes below 104° F., and at this temperature can be injected without danger. Besides combining with camphor, it also combines with iodoform and aristol, and if the mixtures be heated they become liquid and can be easily injected. M. Reynier has injected salol or salol combined with iodoform or aristol, as liquids, into the fistulous passages or purulent cavities with good results. He has also employed it as a dressing over sutured cutaneous incisions, and in drying the liquid salol and iodoform form a true antiseptic varnish over the wound.—*The Quarterly Medical Journal*.

ILL EFFECTS OF PHENAZONE, ACETANILIDE, AND PHENACETIN.

The Therapeutics Committee of the British Medical Association has conducted an inquiry into the alleged ill-effects of these antipyretic and analgesic agents, and reports as follows: "It would appear that the frequency and importance of these ill-effects have been considerably

exaggerated. The predominant opinion is that with one case, especially as regards the initial dosage, ill-effects other than those connected with idiosyncrasy are extremely infrequent, of little or no importance, and are not of such a character as to limit in any material way the usefulness of the drugs. This conclusion does not apply so fully to antifebrin, the action of which has been frequently followed by ill-effects. In the case of antifebrin the dosage employed has, in the majority of cases, been too large.—*British Medical Journal*.

THE ABORTIVE TREATMENT OF ERYSIPELAS BY ICHTHYOL.

Hallopeau has had good results from a treatment devised by M. Juhel-Renoy, and which consists in painting round the patch of erysipelas a mixture of traumaticin (gutta percha dissolved in chloroform) and ichthyol. On the surface of the patch he applies an ointment composed of equal parts of vaseline and ichthyol. Cure is obtained in from twenty-four to forty-eight hours.—*Progrès Médicale*.

SOME OF THE RECENT ADVANCES IN MEDICINE AND THERAPEUTICS.

We extract the following from the address on medicine delivered before the American Medical Association in June by Dr. H. A. Hare, Professor of Therapeutics and Materia Medica in the Jefferson Medical College. In speaking of the practical advances made in medicine and therapeutics, he said :

A very important part of this advance has been recognition of the fact that many conditions heretofore regarded as distinct individual maladies, and treated accordingly, are in reality merely manifestations of functional disorder elsewhere. No more interesting example of this can be adduced than anemia. But a few years ago we were taught that anemia was a state in which the blood was impoverished, and these conditions of anemia might be divided into those which were simple and essential, or, in other words, those which would respond to treatment and those that would not. We had this empirical information, and we also knew by experience that while iron was useful in one form of simple anemia, independent of malignant disease, arsenic was more valuable in another. Later than this we came to regard anemia chiefly as a manifestation of disease in certain blood-making organs, or an important symptom of many perverted functions ; and, finally, the invention and employment of the hematocytometer and the hemoglobinometer has enabled us to separate anemia into a condition in which there is a decrease in the number of corpuscles or a decrease in the amount of hemoglobin in each corpuscle. In other words, we now know that pallor may be due to too few corpuscles or too

little hemoglobin, and this being known it is only a step to the understanding of the empiricism of years ago in regard to the use of iron and of arsenic—namely, that in that form of anemia due to a diminution in the number of blood cells arsenic did good, because by its alterative powers it increased cell activity in blood-cell making organs, while where hemoglobin was lacking iron came particularly into play. For these reasons we find that small doses of alteratives, such as corrosive sublimate and other mercurials, often overcome the anemia due to deficient manufacture of cells. We may, therefore, explain why arsenic usually fails to do good in chlorosis, an anemia of deficient hemoglobin, and succeeds in pernicious anemia, which is characterized by deficient corpuscles, but relatively increased hemoglobin.

It is, unfortunately, only too true that the entire subject of blood making and blood breaking is as yet very imperfectly understood, but our therapeutic facts rest on rational ground now, if not before; and if the pathologist will give us more information upon these subjects, other remedial measures will be introduced, or the empirical employment of others still further explained. Practically speaking, the therapist recognizes two very important points, the causes of which the pathologist must eventually solve, namely, that one class of anemias are due to defective or deficient hemogenesis and another to excessive hemolysis. The former are generally believed to form the simple class, and the latter the essential or pernicious class. It is in the deficient hemogenesis class that we fail. More than this, the causes of excessive hemolysis are so various that we can further divide them into removable and permanent, the removable being represented by the cases in which copremia or auto-intoxication takes place, and the others by the true pernicious anemia, about which we really know very little save that most observers find evidence of profound hemolysis in the percentage of iron in the liver, while in the dark-colored urine they believe a destructive agent exists which, prior to its excretion, has slaughtered many corpuscles. Unfortunately, it is at present impossible for us to separate clinically the hemogenous anemia from that of hemolytic excess unless we find evidence of great corpuscular disintegration in a copious elimination of hemoglobin in the urine, or a jaundice evidently hematogenous in character, or a large number of defective corpuscles, which would perhaps indicate defective hemogenesis rather than that they were scarred veterans of a battle with a poison in the liver cells or elsewhere. *Post-mortem* signs often aid us in the differential diagnosis, but this is too late to do any good to the doctor or patient.

There is one point, however, about which there can scarcely be any doubt, and that is that in many cases iron is greatly abused, being given when there is no indication for it, or more frequently given in excessive

dose. By excessive dose I refer to as much as six to ten grains in a day of reduced iron. The amount of iron in the human body is very small, and every study ever made of its absorption and elimination after absorption has shown that these processes are very slow. Hamburger recovered from the feces nearly all the iron administered, and Jacobi proved that even when the iron was injected into the veins ten per cent. was at once eliminated by the bowels, liver, and kidneys, and the remainder deposited in the liver, spleen, and other tissues in the same manner as is any metallic substance. The researches of Gottlieb have also been in confirmatory lines. When we consider that there is in the human blood only about thirty-nine grains of iron all told, we can see that the use of twelve grains a day in the course of a little over three days places a double quantity of the metal in the economy, which is not needed, and is either cast out, or deposited at any convenient spot, there to lie undisturbed until it can be extruded.

Much, of course, depends upon the cause of the anemia, but there is only one excuse for the use of the doses named, viz., a condition of the digestive apparatus which results in the formation of a sulphide of iron in great quantity, so that only an infinitesimal amount escapes into the system. This explains the empirical fact that in some cases of chlorosis or intense anemia iron has to be given in large doses to accomplish any good.

One of the best and most recent papers on this subject is that of Ralph Stockman, who gives a masterly summary of the subject of the absorption of iron in chlorosis. In this summary he points out that we have three chief theories as to the action of iron in anemia. The first—the absorption theory—is based on the fact that as iron is taken into the body with the food, the iron of the hemoglobin must be obtained from this source, and therefore that medicinal iron given by the mouth must be absorbed. The second theory rests upon the belief that iron is not absorbed when given by the mouth, in addition to that in the food, but simply acts as a stimulus to the mucous membrane of the alimentary canal, therefore increasing the digestion of food, and so overcoming anemia by the general improvement coincident upon proper nutrition. The third theory is that of Bunge, namely, that in chlorotic conditions there exists an excess of sulphur or sulphuretted hydrogen in the bowel which changes the iron in the food into a sulphide of iron, which Bunge states cannot be absorbed. He believes that the inorganic iron which is given as a medicine saves the organic iron of the food by combining with the sulphur, and so indirectly cures the anemia by the protection afforded the food iron. It is important to remember that each of these theories have been supported by many careful experiments, but it is also well to

bear in mind that both the hypotheses and the experiments supporting them may be erroneously based. Thus we have no right to imagine that the inorganic preparations of iron have a stimulating power over the alimentary mucous membrane, or, even if they have, that this power is exercised in the peculiar line of aiding in the absorption of the organic iron of the food. Again, the researches of Hamburger, Damaskin, Gottlieb, Müller, Jacobi, and Socin, which show that after the internal use of inorganic iron there is no increase in the iron in the urine, are valueless so far as the conclusions drawn by them are concerned, namely, that as there is no increase in iron in the urine there is none in the blood, and therefore it is not absorbed. These conclusions are not justified, because they are based on the erroneous view that because iron is not in the urine it is not in the blood, and because it is not in the blood it is not absorbed. Every one knows that in the case of chronic lead poisoning, when the body is saturated with the metal, there is often no lead in the urine, the poison being deposited in the tissues; and if this is true of lead it may be of iron. Particularly is this to be remembered when we find Stockman quoting the researches of Mayer, Bidder, and Schmidt, and a host of others, who have proved that we are not to look to the kidneys as the path for the excretion of iron, but to the intestinal walls. Finally, Stockman has proved that when iron is used hypodermically it cures anemia when it cannot stimulate the digestion or counteract sulphides.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

TUBERCULOSIS AND PREGNANCY.

The author (Dr. Jules Bizourard, in his Thesis at Lyons in 1892) has exhaustively studied the effects of pregnancy on pulmonary tuberculosis and against the transmission of tuberculosis from the parents to the offspring.

The following are his conclusions on these two points:

I. (1) Pregnancy in a woman that is predisposed by hereditary or by bad hygienic surroundings favors the outbreak of tuberculosis.

(2) If a tuberculous woman becomes pregnant, the progress of the disease is nearly always accelerated.

(3) If signs of tuberculosis come on after marriage, advise against pregnancy, and particularly against repeated ones.

(4) Tuberculous women are subject to abortion and to premature labor.

(5) If the woman has just been delivered, advise against the nursing of the child.

II. (1) The theory of the transmission of the germ by the placenta is undeniable, but still it is the exception.

(2) As yet, there have not appeared any positive proofs that the fetus can be procreated tuberculous by the father, or that the tuberculous fetus can infect its mother.

(3) That there is not heredity to the germ of tuberculosis itself (with a few exceptions), but that there is contracted a simple predisposition to tubercular infection.

(4) Contagion takes a large part in the infection of the infant after birth, and the more to be feared is this contagion since the soil has been so well prepared in the child born of tuberculous parents.

(5) There should, then, be given to the child born of tuberculous parents the best possible nursing, and, above all, being careful to withdraw him from all chance of tuberculous infection.

J.A.A.

CHLORAL IN THE TREATMENT OF ECLAMPSIA.

Charpentier strongly recommends the administration of chloral in all cases of eclampsia. His method is to give rectal injections of one drachm in two ounces of mucilage of quinces; if this be returned, a second, and, if needed, a third is given until the drug is tolerated, regardless whether the attack continues or not. An interval with no chloral is then allowed for five or six hours; it is then administered, dose one drachm, and another interval allowed. He rarely exceeds three drachms in eighteen or twenty-four hours, but has used four drachms at times. If the attack ceases after the first series of doses, the medication is slowly withdrawn; if not, the doses are approximated. The medication is never to be abruptly withdrawn, but, after the injections are dropped, doses by the mouth are continued. Usually, labor comes on spontaneously, and if the contractions are vigorous it is let alone; if not, the forceps are used. His conclusions in the article referred to (*Nouvelles Archives d'Obstetrique et Gynecologie; American Journal of the Medical Sciences*) are:

(1) All pregnant women with albuminuria are subject (liable?) to eclampsia. Always examine the urine of a pregnant woman, and if a trace even of albumen is found put her on absolute milk diet. This is the preventive treatment.

(2) If patient be strong and vigorous, and if cyanosis is present, bleed 12 to 16 ounces; then administer chloral, and put on milk diet.

- (3) If patient be not strong, bleeding should not be done; chloral should be used.
- (4) Await spontaneous labor, if possible; if not, use forceps or version.
- (5) Induced labor to be held in reserve.
- (6) Reject Cesarean section and all forcible interference.

DIAGNOSIS OF BREECH PRESENTATIONS BEFORE LABOR.

Pinard (*Revue Médicale*, Louvain, August 31, 1893) lays great stress on tenderness of the fundus. In some pregnant subjects who have passed the sixth month, pressure of the hand on the fundus causes sharp pain. Sometimes the patient feels pain without the part being touched. In both cases the evidence of breech presentation is strong. This pain, or tenderness, is solely due to the pressure of the fetal head, which is harder and more bulky than any other part of the uterus, and distends the upper segment irregularly. That segment is not naturally designed to receive the head. Pinard especially notes that the pain disappears after version. The tenderness is influenced by the size of the head, the amount of liquor amnii, and the flaccidity of the uterine walls. This tenderness of the fundus is present in 70 per cent. of breech presentations.—*British Medical Journal*.

ALBUMINURIA AFTER LABOR.

Aufrecht (*Centralbl. f. klin. Med.*, No. 22, 1893) examined the urine in thirty-two patients, in good health and without gonorrhea, before labor, immediately after, and again twenty-four hours later. The catheter was always made use of and precautions as to cleanliness employed, the result being that no albumen was found before or twenty-four hours after labor, but eighteen of the above patients showed albumen, varying in quantities from 0.002 to 0.0005 per cent. in the urine drawn off immediately after parturition. Boiling, nitric acid, and Erbach's quantitative test were applied to each specimen, and microscopically the albuminous urine contained epithelial cells and in one case blood corpuscles, but never casts. The labors were all normal, and the puerperal period gave no trouble. The author considers that the violent expiratory efforts cause a temporary venous obstruction and consequent albuminuria. From these observations he draws the following practical conclusions: (1) As regards labor, the urine should be examined immediately beforehand; if albumen be present, labor should not be allowed to continue too long, in view of the probable increase of albumen; should eclampsia occur, its cause may lie in the state of the urine, and parturition, if practicable, should be

accelerated. (2) As regards the pathology of the kidney, it is shown that albumen may exist without casts; these are, therefore, probably an accompaniment of a congested kidney, and a product of inflamed epithelial cells. —*British Medical Journal*.

THE TREATMENT OF RETROVERSION OF THE GRAVID UTERUS.

I have had a series of six cases of backward displacement of the gravid uterus in the obstetric ward of the Queen's Hospital under my care during the past twelve months; and the divergent rules laid down in text-books for dealing with this condition have led me to think that a brief summary of the different methods advised may not be considered out of place.

For cases of retention of urine Denman lays down precise directions as to the method of emptying the bladder, advising the use of a flexible male catheter, and drawing attention to an important point which is not referred to in many later text-books, namely, that in some cases the flow of urine ceases before the distension is removed, and says that this sometimes happens in such a manner as to give us the idea that the bladder is divided into two cavities.

In a case reported by Dr. Halliday Croom in the *Edinburgh Medical Journal*, April, 1890, in which death ensued, and in which frozen sections were made *post mortem*, it was found that the urethra was not compressed or distorted, but that the retroverted uterus had compressed the bladder walls against the pubes. The part compressed included the trigone, except a small part under the left ureter, which opened into the distended portion; the right ureter opened into the compressed portion. In this case, a catheter passed its whole length, but no urine was withdrawn, what probably happened being that the catheter coiled itself up in the portion of bladder below the compression; in consequence of this, the abdominal swelling was thought not to be a distended bladder. The pressure in this case was due to the fundus, the cervix being thinned out and soft; and this is probably usually the case, the mere position of the cervix having no effect on the results, and the division into retroflexion and retroversion being practically immaterial.

Playfair, in his treatise on "Midwifery," advises that, after emptying the bladder, the method of replacement to be adopted should be the introduction of an india-rubber bag into the vagina, which is to be distended with water and so exercise constant pressure. Failing this, he advises that the patient should be placed in the usual obstetric position at the edge of the bed and thoroughly anesthetized, and one or more fingers or the whole hand passed into the rectum, and so replacement effected; and

with reference to the genu-pectoral position he says—and I would especially draw attention to this point, as his book is accepted as a guide to midwifery practice by many: "Others recommend the hand and knee position as facilitating reposition; but this prevents the administration of chloroform, which is of more assistance than any change of position can possibly be." And it is this statement that suggested to me that I should narrate the cases I mentioned at the beginning of this paper, as in them the superiority of the treatment by position was very marked. Of these cases, in three there was incarceration with retention of urine and distended bladder, and in the other three there was no incarceration. I will venture to give briefly the history of the first case, as it is interesting as bearing on the pathology of the condition. As I mentioned before, it is generally held that the condition is due to pregnancy taking place in an already retroverted uterus, and in nearly all cases as the uterus enlarges there are various symptoms preceding the absolute retention of urine, the most prominent being bearing-down sensation and irritability of the bladder; but in this case the retention came on suddenly, and was not preceded or accompanied by any other symptoms.

CASE 1. The patient, aged 27, had had four children, and had last menstruated fourteen weeks before admission. She was admitted at 6 p.m. on August 1st, 1892, and stated that she passed water without any inconvenience or pain at 11 a.m. the previous day; on attempting to do so again at 3 p.m. on the same day, she found she could not, and did not pass any more until admission. She had gradually increasing painful desire to micturate, but no other symptom. On admission, the bladder formed an abdominal tumor, and the retroverted fundus could be felt on vaginal examination. Fifty ounces of urine were drawn off by catheter, and with patient in left lateral position an attempt was made to replace fundus with fingers first in vagina and then in rectum, but without effect. The advisability of giving chloroform was considered, but meanwhile it was determined to try the genu-pectoral position. Patient was placed in that position, and immediately felt something move, and on examining her it was found that the uterus had completely righted itself. She passed water naturally a few hours afterwards. She was kept in bed a few days afterwards, being enjoined to lie on face or side and not on back. An elastic ring pessary was introduced. She was allowed to go home. She was kept under observation for two months afterwards, and had no further difficulty with micturition.

CASE 2. In this case the patient had had retention for a week, but had had the catheter passed twice daily by the medical man who was attending her. The same method was adopted with a satisfactory result.

CASE 3. A primipara, aged 19; she had not menstruated for about

three months and a half, and had been complaining of gradually increasing difficulty of micturition for a fortnight, and of complete stoppage for thirty-six hours. She had been under a medical man, and had been treated by medicine, but no examination had been made. The catheter was passed, and 60 ozs. of urine withdrawn; the patient was then placed in the genu-pectoral position, and pressure made on fundus with fingers first in vagina and then in rectum. The fundus could be elevated just above the brim, but could not be made to resume a completely normal position. She was directed to lie on her face, and in a few hours passed water herself, and the next day the uterus was found to have gone back into a normal position.

Of the three cases in which there was no incarceration, in one the uterus was replaced in the genu-pectoral position, and in the other two the mere assumption of the prone position by the patient was sufficient. One of these cases was interesting, inasmuch as there was so great an amount of prolapse associated with the retroflexion that the cervix protruded externally. To sum up, I would say that in all cases of backward displacement of the gravid uterus (retroversion or flexion) associated with retention of urine, after passing the catheter, an attempt should be made to replace the uterus with the patient in the genu-pectoral position before proceeding to administer an anesthetic, and that should this not be successful it is probably better to keep the patient in bed lying as much as possible on the face, and to use the catheter at regular intervals, repeating the attempts at replacement in the genu-pectoral position for a day or two, rather than to place her under an anesthetic and use considerable force in endeavoring to secure replacement.

The subsequent treatment after replacement has been effected is, I think, important, and consists in keeping the patient in bed for a few days, strictly forbidding her to lie on her back, and the insertion of a ring pessary before she is allowed to get up, with subsequent strict injunctions as to the necessity of not neglecting the calls of nature. In all the cases in which these precautions were observed, there was no recurrence of the displacement or subsequent bladder trouble. The pessary may be removed at the termination of the fifth month of pregnancy, after which date the size of the uterus will preclude the possibility of its again descending into the pelvis.—*C. E. Purslow, M.D., in British Medical Journal.*

THE NEUROSES OF THE MENOPAUSE.

Dr. Gustavus Eliot, of New Haven, contributes to the September number of the *American Journal of the Medical Sciences* an article entitled "The Disorders of the Nervous System associated with the Change of Life." After mentioning women's habitual disregard of their health in

their earlier life and the frequency of the occurrences calculated to beget emotional disturbances between the fortieth and fiftieth years of age, he says :

If you inquire carefully in regard to the clinical history of one of these patients, you will find that she suffers from more or less of the following symptoms: Indisposition for exertion, inability to work, forgetfulness, headache, dizziness, insomnia, flushes of heat followed by chilly sensations, sweating, palpitation, flatulence, abdominal distension, constipation, intercostal neuralgia, frequent backaches, and tender spots may be detected in her head, back, and chest.

In the management of these cases, it is necessary to combine very careful hygienic regimen with appropriate medical treatment. Worry and care must be avoided as far as possible. Regular and prolonged rest must be secured. A moderate amount of mental occupation during waking hours is useful. Abundance of fresh air and moderate exercise are essential. Food which can be easily digested, and which has been properly prepared, must be taken regularly and in sufficient quantity. It must be eaten slowly and chewed thoroughly, and time must be allowed for the process of digestion to become fairly established before the resumption of mental or physical exertion. Tea and coffee must be entirely abandoned, and abundance of milk and water must be taken. Bathing and rubbing influence very favorably the circulation and the processes of nutrition. The body must be properly protected, so as to maintain an equable degree of warmth throughout, care being taken to avoid the extremes of an excess or a deficiency of clothing.

The digestive organs are perhaps more frequently deranged than any others, and require most careful attention to secure a proper performance of their functions. Constipation, flatulence, anorexia are the most common and the most important indications for treatment. If constipation exists alone, a pill of aloes and myrrh taken at night, and followed, if necessary, by another in the morning, will generally produce a pleasant effect. Another excellent pill under these circumstances is one containing one-fifth grain of aloin and one-sixtieth grain of sulphate of strychnine. Two or three of these may be taken at different times through the day, if one at night is not sufficient. The object to be aimed at is to secure one easy movement of the bowels each day, unaccompanied by nausea or griping, by means of small doses, repeated, if necessary, of some not very irritating laxative.

If anorexia, constipation, and flatulence are all present, a bitter mixture will generally prove useful—a combination of *nux vomica*, *cascara sagrada*, *cardamom*, and *gentian*, with aromatics, is exceedingly valuable under these circumstances.

If anemia is well marked, iron and arsenic are very useful. If there is no, or only a slight, disturbance of the digestion, pills containing sulphate of iron with carbonate of potash, known as Bland's pills, with the addition of arsenious acid, produce excellent results.

If constipation accompanies anemia, a pill or capsule containing arsenious acid, aloes, nux vomica, and reduced iron may be advantageously prescribed.

If neuralgia is a prominent symptom, five-drop doses of fluid extract of gelsemium will give relief in many cases. In connection with gelsemium, or in place of it, benefit will often be obtained from the use of sulphate of quinine with extract of hyoscyamus.

The use of arsenic has already been mentioned in connection with the management of cases in which anemia is an important factor. In the treatment of certain forms of anemia it is of great value. In combination with iron and nux vomica it is exceedingly useful.

The utility of phosphorus as a nerve tonic has long been recognized. A combination in pill form of one-hundredth grain of phosphorus with one-quarter grain of extract of nux vomica has been used extensively, and with excellent effect. One great drawback to its use is the difficulty of securing pills which have been properly made, and in which the original characteristics of the drugs have been retained.

Phosphide of zinc is frequently substituted for phosphorus. One-tenth grain of this compound with one-fourth grain of extract of nux vomica will often prove of benefit.

The compound syrup of hypophosphites is another preparation which is very popular with the profession, and which has positive value as a nerve tonic.

As a palliative agent, to produce sleep, to equalize the circulation, and to relieve the condition of nervous irritability, commonly call nervousness, no drug is more useful than bromide of sodium. This salt is preferable to the other bromides because it is less unpleasant to take, and is less irritating to the stomach, while at the same time it is not inferior in therapeutic value. In prescribing this very valuable drug, one should never forget that it does not increase the strength or nutrition of the nervous system. It should not, therefore, be relied upon for continuous prolonged administration to the exclusion of other remedies. On the contrary, its use should be supplemented by the administration of general tonics and of special nerve tonics. Iron and arsenic are especially well adapted for this purpose.—*Abstract New York Medical Journal.*

GYNECOLOGY

IN CHARGE OF

JAMES F. W. ROSS, M.D. Tor.,

Lecturer in Gynecology in the Woman's Medical College; Gynecologist to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

EXPLORATORY LAPAROTOMY IN PREGNANCY.

In the August number of the *Buffalo Medical and Surgical Journal*, Dr. Mann, of Buffalo, reports a case of which the following is an abstract:

A patient was brought, concerning whose condition an indefinite history was given, with the request that an exploratory operation should be done. There was a long history of invalidism. The patient was examined under ether, and with the exception of a cystic mass to be found in front of the cervix not much was made out; there did not seem to be anything inside of the uterus. The cervix had been dilated forcibly within a short time, the cavity had been curetted, the sound had been passed, and every evidence had shown that the uterus was empty. The cervix was hard and firm. The patient was flowing at the time, and had menstruated only a short time before. The abdomen was opened. A cyst was found, evidently not ovarian from its appearance, and, on pulling up the omentum over it, it was found to be the uterus. The whole hand was then introduced, and it was found that the case was one of pregnancy about the fourth month. Even with the abdomen open the uterus was so thin walled, so soft, and so flaccid, that it was difficult to recognize it. It was owing to this extreme flaccidity of the uterus that he was unable to recognize the pregnancy by bimanual palpation with the patient under ether. The patient miscarried and made a good recovery.

In the September number of the *Journal of Surgery, Gynecology, and Obstetrics*, a case of exploratory incision on a pregnant woman is reported by Dr. J. F. W. Ross, of which we give an extract:

A young woman, half idiotic, totally deaf, and so near-sighted as to be almost blind, was brought to his out-patient clinic at the Toronto General Hospital by an old man claiming to be her father. She came, he said, according to instructions given nearly two years before to have a tumor removed that was then present, and had been growing since. She had been at that time under Dr. Ross' care in another hospital for a lump in the right side low down, and had been discharged, with the instructions to return if it enlarged. Menstruation had been regular, she stated, and the last time occurred six weeks before. As she was frequently irregular, no stress was laid upon the fact that she had gone six weeks. Owing to her deaf condition she was readily recognized, and her case was readily recalled

to memory. The presence of a mass was distinctly found on the previous examination, but this mass had, to a large extent, disappeared before she left the hospital. She now returned with an enlarged abdomen, with a very flaccid, fluctuating tumor, lying apparently more toward the right side than toward the left. With menstruation continuing, with a hard cervix, and what appeared to be the fundus of a small uterus behind the tumor, the conclusion was jumped at that the case was one of ovarian tumor, and immediate operation decided on.

The patient having been for several weeks under observation on a previous occasion, her conduct had been exemplary, and there was not the slightest suspicion of any want of virtue. Three or four others present at the time of the last examination felt the uterus behind the tumor, and thought the tumor was apparently lying more toward the right than toward the left side. The father stated that he knew the tumor was growing because he had felt it himself—a somewhat strange procedure.

On opening the abdomen next morning the tumor presented a peculiar appearance, owing to the presence of large vessels on its surface; these vessels proved, however, to be in the omentum, spread out in a very thin layer over the tumor. The tumor within looked glistening in appearance, red, and looked neither like an ovarian cyst nor a fibroid. On passing two fingers to one side one ovary was discovered, and, passing them toward the other side, the other ovary was discovered, and it was concluded that the case was one of pregnancy; the abdomen was closed, from six to eight minutes after the first incision was made. On squeezing the nipples, milk was found present in the breasts. The patient made an uninterrupted recovery, and did not miscarry. No fetal heart sounds could be heard during convalescence, but placental bruit could be obtained with the stethoscope in the vagina. The tumor was so flaccid that one could hardly believe that it was nothing but a pregnant uterus.

In subsequent conversation with the father, it was found that a young man had been sent to penitentiary for a rape committed on the patient in England some two or three years before. He could not believe it was possible that she was pregnant. After carrying on a difficult correspondence with the girl by means of letters printed in large type, it was ascertained, with the usual amount of indignation on the part of the patient, that no intercourse had taken place since her arrival in this country. After informing her that she was not speaking the truth, she acknowledged that she had been criminally assaulted just as she had been in England. She said she had screamed very loudly, and further stated, on further questioning, that she had been assaulted four or five different times in different localities and by different people, and that each time she had

screamed. Assertion was then ventured that this must be a very bad and a very deaf city, and she cordially agreed with these sentiments.

In conclusion, the writer states that the surest method of diagnosing pregnancy that can be adopted is to calmly await developments.

GYNECOLOGY AND ABDOMINAL SURGERY.

In the August number of *The American Gynecological Journal*, Eastman says that the contention between antiseptic and aseptic surgeons is an absurd one, for many reasons, and that the antiseptic surgeon is an aseptic surgeon, and the aseptic surgeon is an antiseptic surgeon. He says the aseptic surgeons use chemicals for the purpose of purifying their sponges, for the purpose of washing their hands, and for the purpose of cleaning their clothes they use soap, ammonia, ether, and benzine. It requires chemicals to secure cleanliness.

The difference between those favoring and those opposed to antiseptics is largely imaginary—a play of words. “We can obtain cleanliness, but not without chemicals, and by this I do not mean such agents as are usually considered germicides. I doubt the propriety of killing germs, lest we irritate the tissues. These pretended differences between asepsis and antiseptics can but confuse the average general practitioner, or the beginner in surgery. For example, my friend who had located in the far west, and who had been doing some surgery, returned on a visit. He found his way to my operating room, and was noticing our preparations for work. As I had once been his teacher, I began answering his questions by explaining to him that the hands were the most frequent source by which we convey septic material into the peritoneal cavity, and that for the last ten years I had been studying how to clean my hands; that now I had a soap made by a chemist of olive oil and caustic potash, practically the green soap of the pharmacopeia. I showed him my scrub brush for the hands, which is boiled every time after being used, and then kept in alcohol ready for use again. With this soap and brush, and a stream of running water from a spigot, I could scour my hands with only the hope of making the microbes so blinded, sickened, and weakened that the running water would wash them off the deck of our surgical ship. I explained how it takes repeated rinsings to get rid of the soapsuds from the pores of the skin before we dare venture within the abdomen. He answered me: “I have no use for all your details. I simply put my hands in the bichloride of mercury, and then I know I am safe.” This doctor believed there were two factions, and he had chosen the chemical side of the question. Further, he considered that the washing with oxalic acid and permanganate of potash, when it produces a redness of the

skin, showed that acid was still retained in the pores. This he had proven by using aqua-ammonia and obtaining a lather like soapsuds. "The nearer we stick to the religion and soap of our grandmothers, the nearer we will approach the moral and physical cleanliness of body and mind."

After relating how doctors frequently change everything but their gloves after waiting on a septic case, he says: "This doctor's antiseptic precautions were faulty because of too implicit reliance in germicides, which led him to overlook the fact that any microbe having a particle of self-respect would not attempt to stay where soft water, clean scrub brushes, plenty of elbow grease, and repeated changings of the clothing were customary." It requires the utmost painstaking to have our chain of antiseptic precautions strong in its entirety. This being true of those who are especially engaged in intraperitoneal work, so that the least deviation from the strictest asepsis will be detected in the results obtained, how much more likely is he who is engaged in general work to overlook some important detail in the change of clothing, and especially in what he is handling with his hands, including his gloves.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

REMOVAL OF CANCEROUS INGUINAL GLANDS.

Dr. Rupperecht calls attention to the necessity of a radical removal of the inguinal glands in cases of carcinoma of the umbilicus, the penis, the vulva, the anus, and the lower extremity, and also in many instances of cutaneous sarcoma on the thigh. This practice he has carried out during the past ten years in every case of cancer in the above-mentioned regions, in which a prolonged operation was not contraindicated by debility of the patient, or advanced age. In the groin, as in the armpit, in cases of cancer of the breast, the glands, it is held, should be removed, even though not appreciably enlarged. In cases of cancer either on the right or the left side, only the corresponding inguinal glands are removed; but in cases in which the primary disease is seated in the median line of the

body, the author clears out both groins. The operation, like that for removal of the axillary glands, is an extensive one. A skin incision is made from the spine of the pubes to the antero-superior spine of the ilium, and a second is carried downward from the middle of this along the course of the femoral vessels. The skin is then separated from the sub-jacent soft parts as far as the aponeurosis of the external oblique muscle above, the fascia lata on the outer side, and the adductor muscles on the inner side. The triangular mass of fat and glands thus circumscribed is then carefully detached from the deep fascia by using as far as possible a blunt instrument. In the course of the dissection, it is necessary to divide the saphenous vein. It is often necessary to remove the fat and glands from the fossa ovalis after division of the falciform process, and also to reach deep-seated glands by incising Poupart's ligament.—*Centralblatt für Chirurgie*.

FRACTURE OF THE ACROMION PROCESS OF THE SCAPULA.*

This injury occurred to a man about sixty years of age. He was knocked over by a falling fence, and was thrown upon his left shoulder. The acromion process was fractured at its base, *i.e.*, at the point of juncture with the spine of the scapula. The signs of fracture were: (1) Crepitus on movement being made at the shoulder joint; (2) exquisite tenderness on pressure, limited to the point of fracture; (3) the line of fracture could readily be detected on manipulation at the point indicated. This last sign was easily detected, the bone being subcutaneous at this point. There was little or no deformity, and the only treatment necessary was to provide rest for the injured part by fixing the arm to the chest by means of a wide roller bandage.

The fracture is sufficiently rare to place the case on record. We find in "Hamilton on Fractures and Dislocations," edited by Stephen Smith, the following statement: "There is some reason to believe, I think, that fracture of the acromion process is much more rare than surgeons have supposed, and that in a considerable number of cases reported there was merely a separation of the epiphysis, the bony union never having been completed." The age of this patient precludes the possibility of a separation of the epiphysis. Bony union of the epiphysis with the spine occurs usually about the twenty-fifth year.

THE PHYSIOLOGICAL CHARACTERS OF CARCINOMATA.

"The Physiological Characters of Carcinomata (Primary and Secondary)" is the title of a paper by H. J. Waring, M.B., B.S., B.Sc., F.R.C.S., in *The Journal of Anatomy and Physiology*.

*Under the care of A. Primrose, M.B., in the Toronto General Hospital.

Investigations were carried out with the object of determining whether or not the cells of carcinomatous growths produce, by their metabolism and vital activity, ferments similar to those which are produced by the epithelial cells of the organ in which the primary cancerous growth takes its origin, or whether they produce substances which are peculiar to themselves, or if they have definite physiological characters which are the same as or different from those of the normal epithelium.

Three cases of carcinoma of the pancreas, each with secondary deposits in the liver, and two cases of carcinoma of the stomach, were examined. In all the cases the cancerous material was removed from the cadaver some hours after death (varying from twelve to twenty-four).

Elaborate chemical analyses were made of the carcinomatous masses, and from the results of these series of investigations the following conclusions were arrived at :

(1) The cellular elements of the primary and secondary carcinomata of the pancreas possess the property of producing, as a result of their growth and metabolism, the same or similar ferments, viz., trypsin, amyllopsin, steapsin, and rennin, as are produced by the normal secreting cells of the gland.

(2) The primary carcinomata of the stomach produce the ferments pepsin and rennin, which are the normal physiological products of the secreting cells of the mucous membrane of the stomach. Taking the pancreas and stomach as typical examples of secreting glandular structures by analogy, it may be assumed, with a fair amount of probability, that when carcinomatous growths start from a glandular structure the epithelial elements of these growths will, by their growth and metabolism, produce the same or similar physiological products as are formed by the gland cells when in their normal state.

If these conclusions hold good for all carcinomatous growths, it will be difficult to believe in the sporozoa theory of cancer, unless it can be shown that the parasites act in one of the following ways, viz.:

(1) That by their presence in the cells whence a carcinoma takes its origin, they so stimulate the reproductive elements of the cells as to give rise to the formation of a large mass of cells which grow and divide rapidly ; and in which the protoplasm still retains the physiological properties of the parent cells from which it has been derived.

(2) That the cancerous cells themselves consist chiefly or entirely of sporozoa and their products, and that their sporozoa acquire the physiological properties of whatever epithelium they happen to locate themselves. The second possibility is very unlikely, and the first is difficult to accept unless it can be shown that their so-called psorosperms or sporozoa are very powerful stimulants to the division and multiplication of cellular structures.

SOME REMARKS ON THE USE OF IODOFORM IN SURGERY.

Now that the use of iodoform in surgery bids fair to be discontinued in the practices of some surgeons—the complaints being in some cases directed against its objectionable odor; in others to the circumstance that doubts have been entertained as to its efficacy as an antiseptic substance—it was with no small measure of interest that I recently read an article in *The Lancet*, entitled “One of the Best Applications of Iodoform in Surgery,” from the pen of Mr. Arbuthnot Lane.* In his paper he brings forward its claims in a new light. His method of “stamping in” the purified powder into carious bone cavities, as a dentist would fill a tooth, is alike ingenious and novel, and adds a more or less mechanical application to its more customary usages. Not only does he claim for his method the advantage of displacing the blood-clot, which would of necessity form and be a source of great danger in tuberculous cases, but also that of its being capable of entering into the formation of a restored osseous framework. That such does seem to be the case the citation of his cases, so eminently successful, goes far towards establishing. One of the reasons which urges me to write this paper is that the subject has been for some time of particular interest to myself. So long ago as the autumn of 1886, when I enjoyed the privilege of being house surgeon to Professor Macewen, in Glasgow, I learned in a measure this use of iodoform. It was then the custom, and I know it was for some considerable time later, for that surgeon to fill up all the existing cavities in bones which entered into the articulations excised for tuberculous disease with a powder consisting of one part of iodoform and four of naphthaline. The powder was, however, not “stamped in,” but gently pressed in, the objects being, in the first place, to obviate the necessity for removing any more of the bone than was absolutely indicated, lest the growing parts were endangered, as obviously might be the case in the knee joint; and, in the second, to take the place of the blood-clot which would afford a very suitable soil for the growth of the tubercle bacillus; and, thirdly, to directly inhibit the growth of the bacillus. After the operation the wound was drained with a decalcified chicken-bone drainage tube, and with a dry dressing, left, as a rule, for a month or six weeks before it was again examined. Presumably, the iodoform remained where it was placed whenever the wound healed by primary union. Another advantage of the iodoform here is that it acts as a mild styptic and checks the oozing from the capillaries in the inflamed bone, a quality of much service when aiming at primary union in resections. From that time until the present I have used iodoform for these purposes, sometimes alone, at others mixed in varying proportions with either naphthaline or boracic acid powder. I never had any cause to change this practice.

* *The Lancet*, July 15, 1893.

A case may be mentioned here which bears out entirely Mr. Lane's experience:

A girl, aged fifteen, with a tuberculous history, three years ago came under my care. A suspected focus of caseation existed in her right os calcis. I accordingly separated the soft parts from the outer side of the bone, and finding it softened gouged out almost the whole of its interior, leaving but a shell of bone enveloped in its thickened periosteum. The cavity was carefully dried, and packed more or less loosely with a mixture of iodoform and boracic acid (1 part in 2), and drawing the edges of the wound together I sealed it up. The result was excellent, the wound healed with a single dressing; and the patient can now walk satisfactorily on her heel. How much of the resulting solidity is due to the powder and how much (possibly all) is due to regeneration of bone from the inflamed periosteum is a matter of mere conjecture. I have also used the powder, with satisfactory results, for filling spaces in the soft tissues where tight bandaging was impracticable. That the principles of treatment involved in Mr. Lane's practice are scientific as well as practical I am convinced, and will be of the greatest service in a large number of cases. He has shown their adaptability to cases of erosion. I hope that in again drawing attention to the subject, and in showing how very useful iodoform can be in the treatment of excision, as well as of the wounds of the soft parts, others may be the more readily induced to use it. In my experience it has proved more effectual in powder than in emulsion. It seems rather a fashion to decry its value without sufficient cause.—*R. H. Anglin White-lock, M.B., F.R.C.S., in The Lancet.*

PYLORECTOMY.

At a recent meeting of the National Medical Society of Lyons, M. Maurice Pollosson exhibited a patient from whom he had two months previously removed the pylorus for stenosis.

The patient had been for some time before the operation unable to digest anything. The stomach was markedly dilated. He would vomit food that he had taken fifteen days previously. He had become marasmic. He was but thirty years of age.

The classic median incision for laparotomy was made above the umbilicus. On exposing the pylorus a small, hard tumor, the size of a large almond, was found. On account of the limited size and sharp limitation of the tumor, pylorectomy was decided on. The pylorus was resected between two long forceps, and the stomach and duodenum united by a double plane of sutures—muco-mucous, sero-muscular, musculo-serous. The patient was kept for six days with absolutely no food by the stomach, except some small pieces of ice.

When shown, the patient had recovered completely; he ate and digested well, and had increased in weight to such an extent that his surgeon did not know him after a month.

Speaking of the operation, M. Pollosson insisted on: (1) The necessity of inserting a large number of sutures in the gastro-intestinal operations; (2) the great part taken by spasm in pyloric stenosis: the growth did not fully obstruct the pylorus, for at the time of operation, and under the relaxing influence of the anesthetic, the index finger could be passed through the pyloric opening; (3) on the importance of early operation, so that the whole of the tumor might be removed and the operation be not merely a palliative one.

On examination, the tumor was found to be a cylinder-cell epithelioma.
—*Lyon Médica.* J.A.A.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D., Tor., L.R.C.P., Lond.,

Surgeon to St. Michael's Hospital, Physician to House of Providence and Home for Incurables; Assistant Pathologist, Toronto General Hospital.

URINARY ABSCESES, THEIR PATHOLOGY AND TREATMENT.

M. Bazy, in a clinical lecture (*Progrès Médical*), gives the following views on urinary abscesses. Urinary abscesses are often seen during the course of gonorrhea, and are then either penile abscesses or abscesses in Cowper's glands. In the latter case the abscess is lateral, and has a marked tendency to terminate by a fistula. It was formerly taught that these abscesses were due to lesions of the urethral mucous membrane behind the seat of a stricture; but since Pasteur has taught that urine is an aseptic liquid, it was very evident that the so-called urinary abscess was due to microbes. The invasion of the peri-urethral tissues by microbes is certainly favored by the presence of a stricture, but is not the mechanical consequence of a stricture and does not depend upon the tightness of the stricture, and the abscess often arises, not from the part of the urethra behind the narrowing, but often at the seat of the stricture itself. The conditions which actually determine the formation of an abscess are the degree of infection of the urethra and the urine, and the degree of resistance possessed by the organism against the causes of infection; it is certain that all patients are not alike in this respect, as some seem very liable to take gonorrhea.

Urinary abscesses do not, in most cases, communicate with the canal of the urethra but will do so secondarily if incision be delayed.

As regards the treatment, he recommends early and deep incision to avoid the formation of a fistula, and says it is not necessary to perform internal urethrotomy to prevent the formation of a fistula.—*Medical Chronicle*.

A METHOD OF PASSING A GUM-ELASTIC CATHETER IN CASES OF PROSTATIC ENLARGEMENT.

To overcome the obstruction met with in passing gum-elastic catheters in cases of prostatic enlargement, Dr. Phélip has devised the following simple, and at the same time ingenious, method :

He passes a needle armed with a stout thread by the eye of the catheter to the apex, and pushes it through on the concave side. The thread is then pulled through to the knot at its end. The catheter thus threaded is passed into the urethra until the obstruction is met ; then, by gently drawing on the thread, the point of the catheter is raised above the obstruction and passed into the bladder easily.

If the prostate be very large, pressing over the hypogastrium with the hand, the passage is facilitated.—*Lyon Médica*. J.A.A.

NEPHRECTOMY FOR URETERITIS.

James Israel (*Berliner klin. Wochenschr.*, 1893, No. 27, p. 641) has reported the case of a man, twenty-eight years old, who for eight years had attacks of left-sided renal colic recurring at intervals of three weeks, with pain in the course of the ureter in the intervals between the paroxysms. Hematuria was frequent, and red blood corpuscles were at all times to be found in the urine. A definite history of gonorrhea could not be obtained. In the belief that the trouble was due to a renal calculus, the kidney was exposed and incised, but no foreign body was found, although the pelvis and calices were dilated. The wound in the kidney was closed by means of five catgut sutures, and united by first intention. The operation was followed by no improvement in the man's condition, so that, as soon as recovery had taken place, the ureter was exposed and found to be inflamed, thickened, adherent, and stenotic. At a loss as to how to proceed, the wound was left open, but as the colic persisted the kidney was extirpated two days later. The removed organ was of normal size, but, upon section, displayed marked hydronephrotic dilatation of pelvis and calices. The relief was immediate and maintained.—*Medical News*.

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College;

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopedics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

A NEW REMEDY FOR PERTUSSIS.

In the *Medical Times and Register* (1893, xxvi., 273), Dr. Sidney B. Straley introduces a new remedy for pertussis.

He urges the use of a tincture of thymus serpyllum, made from the fresh green plant. His investigations have led to the following conclusions :

- (1) Thymus serpyllum is a specific for pertussis.
- (2) It acts in any stage of the disease.
- (3) It is necessary to use the green plant.
- (4) It is also a nerve sedative and gastric stimulant.
- (5) It is perfectly harmless in doses as large as a teaspoonful of the tincture for a child eight years of age. The usual dose is from xx. *m* to xxx. of the green tincture.
- (6) The action is fully established in twenty-four hours, and completed in five days.
- (7) Indications are that there will be no recurrence subsequently; at least not more often than in cases which run their full course.

HEART STRAIN IN PERTUSSIS; ITS EFFECTS; ITS TREATMENT. (THE HEART, THE PULSE, THE GENERAL CIRCULATION, THE KIDNEYS.)

In a most instructive paper read before the American Pediatric Society, Dr. Henry Koplik directs attention to the frequency with which heart strain accompanies pertussis. The author considers that there is established a condition of persistent over-distension which gives evidence of its presence, first, by a puffy and swollen condition of the face, and frequently the evidence is found to be in association with a heart murmur, certain changes in the pulse tracings, and with the diminished secretion of urine containing albumen. In the investigation fifty cases were carefully watched, both during the paroxysmal and convalescent stage. The heart murmur is thought to be due to slight incompetence of a mechanical nature. The little patients show the strain upon the heart by a desire to keep quiet, to sleep, and by a disinclination to exertion; as, for example, going upstairs.

Continuing, the author tries to demonstrate that not only is the heart badly hampered in its action and overstrained during the convulsive paroxysm, but that the direct result of the recurrence of the paroxysms was to generate a condition of overstrain in the right ventricle. This condition in pertussis might be called acute overstrain of the heart. The acuity of the condition precludes the possibility of compensation being at once created. The result is that various disturbances which will be pointed out to exist in pertussis after the beginning of the convulsive stage are the result, not of the immediate paroxysm, but rather the condition which exists in the heart in the intervals of the paroxysms. The venous stasis during the paroxysms does not cause the edema of the face, the pallor, the cyanosis, the general edema of the surface. For, if the heart were in a sound condition between the paroxysms, a few contractions would soon restore the mean arterial pressure, and relieve the venous stasis and increased mean venous pressure.

The significance of albuminous urine is next considered. The author believes it to be due, not to the action of the product of infective organisms, as in scarlet fever, but due simply to passive venous congestion, especially that present during the intervals between the paroxysms.

Treatment. In his chapter on treatment Dr. Koplik contents himself with alternating the use of digitalis in conjunction with whatever drug may be used for the control of the paroxysm. He says: "In the simple use of digitalis combined with our other remedies, I found that a very useful and now, to me, absolutely necessary drug has been long neglected. No text-book mentions its use in simple pertussis. I think the use of digitalis, in any form agreeable, is indicated, with the ordinary pertussis remedies, as soon as we see the first indication of heart strain. This is the swelling about the face and eyes. The tincture, a minim for every year up to the second year and then a half minim additional, as indicated every two or three hours, is a great support to the heart muscle."

THE MANAGEMENT OF SUPPURATION COMPLICATING TUBERCULOUS DISEASE OF BONES AND JOINTS.

Dr. Gibney, of New York, in an article published in the *Medical and Surgical Reporter* (1893, lxviii., 240), gives the following rules:

(1) Protect the joint about which the bone lesion exists in the early stage and in the later stages, whether the abscess is let alone, aspirated, or incised.

(2) In cases where the suppurative process is confined to a small area, it is good surgery to leave the small abscesses alone if the protective appliance is adequate.

(3) It is good practice to aspirate where the abscess is in the way of the proper adjustment of apparatus, and by such procedure one may expect good results in at least fifty per cent. of the cases aspirated.

(4) The simple incision of an abscess dependent upon bone disease depends for good result upon the extent of the bone lesion.

(5) Excision of the hip is not a measure to be employed in all cases where extensive suppuration exists, but must depend largely upon the condition of the patient and the location and the extent of abscesses.

(6) Expectant treatment for the knee and ankle joint in children yields the best results for life and limb.

(7) Amputation of the ankle in a child is rarely ever justifiable except when amyloid disease of liver or kidneys threatens or is present ; of a hip, after a thorough excision has failed.

(8) The long-continued employment of a good fitting splint to the back in Pott's disease of the spine will yield better results than any operative procedures on the bone with which I am familiar.

DIPHTHERIAL HEMIPLEGIA.

Donath reports this case. On the third day of convalescence from pharyngeal diphtheria, the patient, a boy aged 8 years, was seized, during sleep, with right hemiplegia. The face was implicated, and for several days there was complete motor aphasia. The speech faculty underwent considerable improvement, though at the end of five months signs of typical hemiplegia, with contracture, persisted ; the right eye showed hypermetropia 7 D, with internal strabismus ; the left eye, slight myopia.—*Neurol. Centralb.*

FIXATION AFTER EXCISION OF THE KNEE.

Dr. H. Augustus Wilson (*American Journal of the Medical Sciences*, March, 1893) gives a review of the literature of this subject, and points out the frequency of deformity after excision. Of one hundred and eleven cases, firm, straight union was obtained in twenty-one, flexion in four, posterior displacement of tibia in two, no union in nine, death in nineteen, re-excision in seven, subsequent amputation in eight, ultimate condition of leg not stated in fifteen. It is considered that a more or less serviceable leg was obtained in thirty-seven cases out of one hundred and four.

He arrives at the following conclusions :

(a) That metallic bone-sutures will secure the most efficient internal approximation.

(b) That they should never be removed unless some serious conditions demand it.

(c) That the entire leg should be kept free from the patient's control by external splint for from four to six weeks.

(d) That the most important element in the treatment is the prolonged use of a rigid brace.

TRANSMISSION OF TYPHOID FEVER FROM MOTHER TO FETUS.

An interesting case demonstrating conclusively that typhoid bacilli may pass from the maternal to the fetal circulation is reported by Janiszewski (*Münch. Med. Woch.*, Sept. 18th, 1893). A woman, æt. 38, gave birth, in the third week of a typical attack of enteric fever, to an eight months' child. The infant died in five days' time. At the necropsy, there were hemorrhages in the kidneys, and patches of consolidation in the lungs. The spleen was enlarged, but the intestine showed no change. Portions of the lungs, spleen, kidney, mesenteric glands, and intestine in the neighborhood of the ileo-cecal valve showed the presence of bacilli. These bacilli were proved both morphologically and by the usual cultivation experiments to be typhoid bacilli.

SUTURING THE TENDO-ACHILLIS IN CORRECTION OF DEFORMITIES OF THE FOOT.

(2) In the *International Medical Magazine* for August, 1893, Dr. Wilson has an article on "Suturing the Tendo-Achillis in the Correction of Deformities of the Foot."

The operation is performed by splitting the tendon in the middle for a distance nearly twice as great as the amount of lengthening required, and making section of the opposite halves at the ends of this incision. The split halves are then slid past each other as far as may be desired, and are then sutured together with catgut.

The result is a definite lengthening, and Dr. Wilson employs the same method for shortening the tendon in talipes calcaneus.

This method of operation was first employed by Wm. Anderson, F.R.C.S., October 18th, 1889, and was described by him in a lecture before the Royal College of Surgeons, June 10th, 1891, and published in *The Lancet*, July 18th, 1891.

Dr. Keen, at the suggestion of Dr. Weir Mitchell, performed a similar operation on the hand, Nov. 29th, 1890, and described it in a paper read before the College of Physicians of Philadelphia, March 4th, 1891.

FORCIBLE CORRECTION OF ANGULAR DEFORMITIES OF THE KNEE.

Goldthwaite, in *Boston Medical and Surgical Journal*, Sept. 7th, 1893, says : Cases are divided clinically :

(a) Those in acute or subacute stage, deformity maintained by muscular spasm.

(b) Those having complete bony ankylosis, as the result of extensive osteo-arthritis.

(c) Those in which malposition is maintained by adhesions about the joint.

Only the last class of cases are treated by the apparatus described. Under anesthesia, the adhesions are broken up as much as possible by the hands ; then the apparatus is applied, and forcible straightening is effected by the action of a lever. The apparatus presses with one end of the lever, which constitutes the fulcrum, upon the lower end of the femur, exposed by the backward displacement of the tibia, which occurs in these cases, while a band, attached to the same lever, passes behind the tibia in its upper part. The instrument is continued downward several inches below the foot. As its lower end is carried forward, it carries with it the displaced tibia, and also extends the leg.

Cases illustrating the use of the apparatus and the results of treatment are figured. Its use is indicated where all acute conditions have subsided, and there is not bony ankylosis.

TREATMENT OF LATERAL CURVATURE BY MEANS OF PRESSURE
CORRECTION.

There are certain resistant cases in which there are shortened ligaments that prevent the patient from straightening out by any muscular effort. In such cases forcible correction must either take the place of or must be made to precede and aid the treatment by gymnastic exercises.

An appliance is figured by means of which, while extension is made upon the spine, the projecting portions of the thorax are forced by pressure into an improved position, and are retained by wearing a plaster jacket, applied while the apparatus is being employed.

The objects of the treatment are : (1) To increase the flexibility of the spine in parts where this is abnormally limited ; (2) to maintain the improved attitude by retention apparatus.—*Bradford and Brackett, in Boston Medical and Surgical Journal*, May 11th.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for incurables.RESEARCHES ON THE MICROBE OF VACCINE, AND, IN PARTICULAR, ON
THE COCCUS OF RED VACCINE.

After prolonged researches on the micro-organisms of vaccine, Dr. Maljean has come to the following conclusions :

- (1) In nearly all the red papules of vaccination a pure culture of a special micrococcus is found ;
- (2) The micrococcus is found in the pustule of both the man and the heifer, sometimes associated with other microbes ;
- (3) It is again found in the glycerined vaccine pulp ;
- (4) When a heifer is inoculated with a pure culture, this microbe produces the classical vaccine lesion and confers immunity ;
- (5) After a second passage through the heifer, this microbe gives rise to a vaccine that is very active and purified of any material that would produce inflammatory action not that of vaccine.—*Gaz. Méd. Picardie*, August, 1893.

J.A.A.

PERITONITIS WITHOUT PERFORATION OF INTESTINES AND BACILLUS COLI
COMMUNIS.

L. Sordollet concludes from observation that the bacillus coli communis often gives rise to peritonitis without perforation of the intestine. The passage of the bacillus through the intestinal walls is favored by simple desquamation of epithelium from the mucosa of the gut, accompanied by high intra-intestinal tension, by more profound alterations of the walls, and also by a simple falling off in nutrition. Once having reached the peritoneum, the bacillus diffuses itself rapidly through the different organs of the body. It can be found in the liver, spleen, kidneys, lungs, thyroid body, and the meninges. In these it may excite inflammation, even suppuration.—*Rev. Intern. de Bibliog. Méd.*

CONSTANT PRESENCE OF BACILLUS COLI COMMUNIS IN COW'S MILK.

The injection of cow's milk beneath the skin in rabbits constantly gives rise to the formation of abscesses which contain the bacillus coli communis. The same germ having been shown to be the cause of many cases of suppuration in man, the writer advises careful cleaning of the cow's

udder, and also of the milker's hands, before milking, and the absolute avoidance of the use of uncooked milk.

Amongst the micro-organisms which were found in milk by Fiorentini and Parietti, and spoken of as the bacilli of rabbit septicemia, Abba believes that he recognizes the bacillus coli communis.—*Abba, in Centrallb. f. Bakt. u. Parasit.*, August 14th, 1893.

CAN LIVING CHOLERA BACILLI BE CARRIED WITH DUST THROUGH
THE AIR?

Thin layers of finely-powdered garden earth, fine white sand, street and floor sweepings, and mixtures of dust and diarrheal discharges, were moistened with cultures of cholera bacilli. They dried in fourteen to sixteen hours, and were then pulverized. At various intervals of time, cultures from these mixtures were obtained by inoculation, and by allowing the dust disturbed by being blown upon to settle on gelatine plates. The results of all the experiments were the same. While the bacilli died rapidly during the process of drying, some of them were still alive after the lapse of twenty to twenty-four hours, if sunlight were excluded, were carried about with the dust, and developed colonies. As an exception, solitary bacilli survived three days. The lesson is clear. Although the slight liability of the materials soiled by choleraic discharges to the formation of dust, and the rapid death of the bacilli in drying substances (materially hastened by the action of sunlight), render the propagation of cholera in this mode exceptional, it is, nevertheless, possible for living cholera bacilli to be carried with dust through the air, and to infect food, water of streams, etc., or to enter our mouths.—*Uffelmann, J., in Berliner klin. Wochens.*, June 24th, 1893.

SOME POINTS IN CONNECTION WITH THE ETIOLOGY OF TUBERCULOSIS.

A fact of very great interest regarding the alleged interdependence of human and bovine tuberculosis has recently been brought to light by Professor Jansen, of the Veterinary School in Tokio.* As is well known, the view that there is a distinct etiological relationship between the disease in man and in cattle was very widely adopted a few years ago, and, indeed, it is mainly owing to that belief that the disease as it affects cattle has recently received so much public attention. Jansen's observations are of interest, because they show that human phthisis may be quite as prevalent in a country where the cattle are free from tuberculosis as it is here or in any other part of Europe.

Until a few years ago tuberculosis existed in Japan only among the human population, the native cattle being quite free from the disease.

*Archiv. f. wissen, u. prakt. Thierheilkunde.

According to a report by Dr. Baelz (quoted by Jansen), tuberculosis was and is more prevalent among the Japanese than it is in Germany ; and, contrary to what is the case in the latter country, most of its victims are claimed from among the upper classes. And then comes the interesting fact: "The Japanese cattle are completely free from the disease ; neither in the slaughter-houses at Yokohama and Tokio, nor on any other occasion, has the slightest trace of tuberculosis yet been found among cattle of the pure Japanese breed. But matters are quite different in the case of the foreign breeds and crosses. Since the opening up of the country, partly with the view of improving the breed, partly for milk production, more cattle have been from year to year imported, and until recently exclusively from California. Among these it is especially the Shorthorns, Devons, and Ayrshires that are represented, and also American breeds, and these breeds have been used in part to propagate their own kind ; in part also for crossing Japanese cattle. Facts disclosed in the slaughter-houses and observations made at the Veterinary School show that with few exceptions the animals imported from America and their progeny are more or less tuberculous, and, of the crosses, 50 per cent. are already affected with the disease."

Here, then, is a most conclusive proof that tuberculosis may be extremely prevalent in man, even where the source of infection which some have thought to be the most important is not in existence. Of course, this does not prove that infection from cattle to man is not of frequent occurrence here, but it is an element of proof in that direction. Indeed, every other consideration points in the same way, and goes to show that, while there may be occasional cases of infection of human beings from cattle, and *vice versa*, still in the two species the disease is practically independent—cattle are infected from cattle, and human beings from human beings.—*Editor, in Jour. of Comp. Path. and Therap., Sept.'93.*

MICROBICIDAL FUNCTION OF THE DIGESTIVE JUICES AND CONTAGION THROUGH FECAL MATTER.

We have endeavored to elucidate the microbicidal function of the digestive juices by studying their action on the vitality or the virulence of three different kinds of microbes—the bacillus pyocyaneus, the anthrax bacillus, and the bacillus of tuberculosis—when allowed to remain a certain length of time in the stomach, or when allowed to pass through the whole alimentary tract of certain animals.

The ingestion of food such as soup, containing a considerable number of germs, gave us the following results as to the action of the gastric juices :

The bacillus pyocyaneus, taken by the dog in his food, loses its chromogenic function after being in the stomach five hours. In the guinea-pig they are found unchanged in the feces.

The bacillus of anthrax retains its virulence after a sojourn of eight hours in the dog's stomach. In the dog, too, the bacillus of tuberculosis was unchanged in virulence after twelve hours; the same fact was observed in the rabbit and in birds.

The action of the intestinal juices was studied on the bacillus pyocyaneus in the guinea-pig, and on the bacillus of tuberculosis in the dog and pigeon. The former passed through the whole alimentary tract of the guinea-pig without losing its virulence; the latter comported itself in the same way in the dog. It is quite easy to stain it in the feces by Ehrlich's method. Tuberculosis can also be transmitted by the fecal matter. The results in the pigeon were identical with those in the dog.

It follows from these experiments that the animals, the dog and pigeon, might become dangerous agents in the dissemination of tuberculosis if allowed to feed on substances coming from subjects of this disease.
—*MM. Cadiac and J. Bourney, in Lyon Médica.* J.A.A.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

AND

E. HERBERT ADAMS, M.D., D.D.S.

THE *Medical Record* states that the board of health of New York city has, during the past year, destroyed four million pounds of bad meat, fish, fruit, and vegetables.

URETHRITIS OF VELOCIPEDISTS.

M. Millée, in a report to the Société de Médecine et de Chirurgie Pratiques, at its session held on February 16th last, mentioned numerous cases of urethritis in velocipedists, which he attributed as due to want of care in exposing the perineum to unusual irritation on the saddle of the bicycle.
—*The Sanitarian.*

OPIUM HABIT.

According to some recently published statistics, every tenth adult in Paris is a victim of the morphine habit.—*Medical Press.*

ANTI-EXPECTORATION.

The Women's Health Protective Association of Pittsburg, Pa., have started an anti-spitting crusade. By means of pamphlets and placards they are endeavoring to educate the public, and especially consumptives, as to the danger of expectorating on floors and sidewalks.

THE LASTING CHARACTER OF SOIL POLLUTION.

Dr. Lanciani, in his work on ancient Rome, says that, while a system of garbage collection existed under Roman rule, the disposal of refuse was as crude as it is in many modern towns and cities. Dr. Lanciani, in his excavations, dug up some stones on which were written some of the sanitary ordinances of the times. The text of one of these reads: "C. Centius, son of Caius the Prætor, by order of the Senate, has set up this line of terminal stones to mark the extent of ground that must be kept absolutely free from dirt, and from carcases and from corpses. Here also the burning of corpses is strictly forbidden." When Dr. Lanciani dug up these stones on June 25th, 1884, and about two thousand years after the use of this area for sewage disposal, the soil was still so polluted and the stench from it so horrible that even his workmen, inured to such work as they were, found it absolutely unbearable, and had to be relieved at frequent intervals.—*Engineering News*.

MICRO-ORGANISMS IN THE MILK OF HEALTHY LYING-IN WOMEN.

Palleske (*Virchow's Archiv.*) concludes, as the result of a series of researches, that micro-organisms are to be found in the milk of many healthy women—possibly fifty per cent. These germs belong to the cocci, and solely, as far as Palleske has himself determined, to the variety known as *staphylococcus pyogenes albus*. It is doubted whether the germ reaches the mammary gland through the blood current from without. It is certain that the *staphylococcus* may actually abound in milk fresh from the mammary gland without the simultaneous or consequent occurrence of inflamed breast or general symptoms of fever.—*The Sanitarian*.

SECRET AND POISONOUS MEDICINES.

Hunter McGuire, in his presidential address at the last meeting of the American Medical Association, stated that he thought the association owes to the people of this country an earnest effort to stop the sale of secret and poisonous medicines. Free trade in physic is permitted only in America, so far as he could learn, and any quack can advertise in the reading and other columns of our newspapers his so-called patent medi-

cines. Many of these nostrums are known to be poisonous and, of course, hurtful. All over continental Europe, grocers are forbidden to sell any pharmaceutical preparations or compounds. This right is restricted to the pharmacist or apothecary, and he is often subjected to rigorous inspection, to very rigid laws, and to heavy penalties for their violation. He thought that if each state would require the vendor of any secret remedy to subject his formula to a board appointed by the state for this purpose, said board having the power to grant or refuse a license to sell, this already great and growing evil would be materially lessened or stopped. It is high time that something was done in reference to this matter in Canada.

ERRONEOUS IDEA ON PTOMAINES.

The *British Medical Journal* points out that not only the community at large, but also many physicians, seem to have wrong ideas about the chemical products of bacteria. The principal error consists in supposing that the toxic properties of these substances can be destroyed by heat such as is sufficient to destroy the bacteria themselves. Many of these toxins are very stable against heat; and although the bacteria which produced them may be entirely destroyed, the poisonous properties of the substance may remain. Canned goods, if they contained these products when they were put up, may be poisonous even though sterile. Another mistake is to suppose that the ptomaines are necessarily dissolved or distilled by boiling: they may remain hidden in the centre of a piece of meat. It is perfectly possible to suppose that one sardine only out of a box may be poisonous.—*The Sanitarian*.

BILL AGAINST THE ADULTERATION OF FOOD.

The State Board of Health of Rhode Island is endeavoring to have the General Assembly enact a law which defines the adulteration of food products as follows:

- (1) If any substance or substances have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.
- (2) If any inferior or cheaper substances have been substituted wholly or in part for it.
- (3) If any valuable constituent has been wholly or in part abstracted from it.
- (4) If it is an imitation of, or is sold under the name of, another article.
- (5) If it consists wholly or in part of a diseased, decomposed, putrid,

or rotten animal or vegetable substance, whether manufactured in the case of milk, if it is the product of a diseased animal.

(6) If it is colored, coated, polished, or powdered, whereby damage is concealed, or if it is made to appear better or of greater value than it really is.

(7) If it contains any added poisonous ingredient, or any ingredient which may render it injurious to the health of a person consuming it.

RESPONSIBLE FOR THE CHOLERA.

Mr. Ernest Hart, in his address before the American Medical Association, said: "Cholera comes from India, and only India, although it sometimes hibernates in Europe."

The above statement of Mr. Hart is unquestionably true. It is likewise true that India is a dependency of and absolutely governed by England. Such being the case, and her leading sanitarians aware of the conditions and situation, it becomes the highest moral and sanitary duty of the English Government to take arbitrary measures for the eradication of this disease, that ever and anon menaces the civilized world with a dread epidemic.—*Lancet Clinic*.

PREVENTIVE MEDICINE AT OXFORD.

Our oldest university has at last awakened to the necessity of taking part in the progress of preventive medicine, and of rendering her degree in Public Health less exclusively restricted. Following the wake of Cambridge, this is now proposed to be open to all registered medical practitioners. A statute embodying this important change will be promulgated before Convocation on May 2nd next. There is to be an annual examination by four examiners, presided over by the Regius Professor of Medicine. The subjects will comprise (a) General Hygiene; (b) General Pathology, with special reference to infectious diseases; (c) Laws relating to Public Health; (d) Sanitary Engineering; (e) Vital Statistics. Every candidate must have been registered for a twelvemonth, must have spent six months working in a Public Health Laboratory, and another six months as assistant to a health officer of a town or county of at least 50,000 inhabitants. We trust that the statute will meet with no opposition, and that the Oxford Diploma in Public Health will be eagerly sought after, and confer the same distinction as the other degrees of this university.—*London Lancet*.

THE INTERNATIONAL CONGRESS ON PUBLIC HEALTH.

This congress was held in conjunction with the annual meeting of the American Public Health Association in Chicago, from the 9th to the 14th ult.

Europeans were somewhat conspicuous by their absence, although Sir Joseph Fayrer and Sir Charles Cameron sent papers to be read. Russia and Norway had one representative each, as also Japan. From Mexico there was a large contingent, and many papers were read in Spanish, to the intense edification of the audience. All sections of the United States were well represented. Of Canadians there were five, besides some who have become residents of the neighboring republic. The American Public Health Association did Canada the honor of selecting Montreal as the place of meeting next year, and electing Dr. Lachapelle president. It is to be hoped that Canadians interested in the maintenance and improvement of health and the advancement of scientific studies along this line will show their appreciation by arranging to attend.

A very large number of papers appeared on the programme—too large to permit even of the briefest synopsis here. Five were written by women, three of them describing means taken for interesting women in sanitary work, and advancing sanitary knowledge and practice among women and in the household ; one was on food. This is a field in which more women can be usefully engaged, and to which we would gladly welcome them even should some of them be obliged to forego the scalpel and the court room in order to enter it !

Quarantine was, of course, fully considered, and the efforts made by Canada were referred to with marked appreciation. Texas could not say as much for Mexico, but commended what advancement had there been made ; whilst some of the Mexicans owned that their system was not what it should be, but seemed hopeful of further improvement.

Dr. Benjamin Lee, secretary of the State Board of Health of Pennsylvania, in a paper entitled "Shall Our Lepers be Cared For?" advocated special institutions for them ; whilst Dr. C. N. Hewitt, of Minnesota, stated that the experiment has been tried for many years of allowing lepers to go at large in that state, keeping them under observation, and that the disease has not spread. He considers that it can only be communicated by inoculation through an abraded surface. He cited Dr. Hansen, of Norway, as supporting this view. He thought the infection should not be placed in the same category with that of scarlatina or measles, but rather with that of syphilis ; that if the leper is made to confine himself to his own clothing, bedding, and eating utensils, and not to allow them to be used by others, there will be no spread of the disease. The value of this opinion lies in the fact of its being supported by direct observation of lepers. Whether

similar observation elsewhere supports this opinion must be seen before we can afford to throw aside the views and precautions of other lands and times.

Many of our readers are aware that an experiment station has been in operation at Lawrence, Mass., for some years. Some very interesting information was given in a paper by Mr. Geo. W. Fullér, biologist to the station, in regard to the purification of water by filtration on the large scale. Results showed that after applying water mixed with bacterial cultures, between 99 and 100 per cent. of the bacteria were removed by the experimental filters. Applying these results practically to the water supplies of the state, it is found that from the water supplied to Lawrence itself a filter two and a half acres in extent removes from 96 to 98 per cent. of the bacteria in the natural water. The population of Lawrence is 50,000. In the discussion statistics were given showing similar results in connection with the filtration of some of the water supplies of London, England.

A paper on tuberculosis in cattle was read by D. E. Salmon, D.V.M., chief of the Bureau of Animal Industry at Washington. He gave the results of hypodermic injections of tuberculin, which were similar to those recorded by Mr. J. J. McKenzie, biologist to the Board of Health of this province. Contrary to a view he once held, he does not think pulmonary tuberculosis is caused primarily by ingestion of bacilli into the alimentary canal. This, of course, does not mean that abdominal tuberculosis is not produced in this way. Dr. Salmon also stated that he had never been able to demonstrate the existence of spores in the bacillus of tubercle, thus supporting the observations of Sternberg.

Very intensely practical exhibits were the disposal of the sewage and garbage of the World's Fair. The sewage is treated on the plan designed by Mr. Kinebuhler, at Dortmund, Germany. In a building are four tanks, reaching from below the ground floor up to a raised scaffolding in the second story. Each tank is fifty-two feet high, and thirty-two feet in diameter in its upper portion. The shape of the lower twenty-two feet is that of an inverted cone. In the centre of the tank, and concentric with its wall, is a cylindrical tube, six feet in diameter, running almost to the bottom. The sewage, as it enters the tank, receives and is mixed with a solution of lime and alum. These assist in the formation of a precipitate, which settles in the cone-shaped bottom after passing down through the cylinder, whilst the partially clarified liquid rises through the outer portion of the tank and flows off. As the precipitate settles to the bottom, it is forced into a set of filter presses, the fluid being squeezed out and the solids pressed into cakes, which are then removed, and may be disposed of on the soil or cremated. At the World's Fair it is sent over to the Engle crematory, which forms the other exhibit referred to. As this, with some other forms

of crematory, were described by the writer before the Ontario Medical Association two or three years ago, we will merely say here that this is the one in which the matter to be destroyed is played upon by two fires, one above and the other below. In the present instance the action is intensified by means of an oil blast to each fire, a small stream of oil being forced in and driven over the fire space in the form of a fiery spray by the aid of an air blast—something after the manner of a coarse atomizer.

The Rumford kitchen was an exhibit of a series of scientific dietaries and food preparations. It was under the superintendence of Mrs. Ellen Richards, M.S., of the Massachusetts Institute of Technology, and of Miss Daniels.

Since the time of my former article in July, a number of Pasteur filters have been set to work in the grounds as well as in the buildings.

There were some exhibits of sterilizing and disinfecting apparatus. Of those on the larger scale, there were none as effective as that invented by our fellow-citizen of Toronto, Mr. B. McEvoy.

In conclusion, I may be permitted to say that whilst the World's Fair far exceeded our expectations, this result was not due to the hygienic exhibit. The contributions in this department might have been more numerous and better. It is to be hoped that at the next World's Fair there will be an improvement in these respects. All honor to those who did their share in the meantime!

W.O.

Editorials.

MEDICAL MARTYRS.

A COMPLETE list of medical martyrs who have fallen victims to disease contracted in discharge of their professional duties would be a very long one. The *British Medical Journal* of October 21st announces the deaths of two promising young practitioners who died from diphtheria contracted in their ordinary practice. Dr. Herbert Ashdown, as a student, had an exceptionally brilliant career, and his work as a teacher in the University of Edinburgh, where he had made a reputation as an original investigator, was greatly appreciated. Mr. Lucas also died from the same disease under peculiarly sad circumstances. He had distinguished him-

self both at Epsom College and at the Middlesex Hospital, and his prospects for the future were of the brightest sort.

Shortly previous to this issue, the same journal recorded the premature death of Mr. Arthur Durham. The *Journal*, in commenting on these and other deaths from similar causes, says: "The loss is ours; to them has been given the privilege of meeting the death which waits for us all under the most enviable conditions. As Goethe says: 'Happy is he who dies 'mid battle's splendor,' and it may be said doubly happy are those who fall on so glorious a battlefield as that of medicine against disease."

In connection with this subject, we have to record the serious illness of Dr. Roswell Park, of Buffalo, as reported in the *Buffalo Medical and Surgical Journal* of this month. Dr. Park contracted diphtheria in operating on two children of Dr. V. Mott Pierce, and was removed to the Kimberly Cottage of the Buffalo General Hospital. It has been our pleasure in this province to receive Dr. Park as a visitor to the meetings of our Ontario Medical Association on two or three different occasions, and it is needless to say that we have formed a high opinion of him. We are glad to learn, at the time of writing, that Dr. Park is improving, and has passed the principal dangers of the malady, and we sincerely hope that he may have a speedy return to full health and strength.

ONTARIO MEDICAL COUNCIL.

MUCH interest is likely to be taken in the elections of the College of Physicians and Surgeons of Ontario, which will take place some time during next year. The Medical Defence Association has certainly done much good in removing the apathy which has heretofore existed in the minds of a large majority of the profession with reference to matters pertaining to the Medical Council. Most of the present members will be candidates for re-election. In nearly all cases opponents will be placed in the field, and many of the contests are likely to wax loud and warm. In consequence of the redistribution of the territorial divisions, which has been designated a "gerrymander," the constituencies of some of the members have been materially changed. Among the most important of such changes are those which bring Drs. Bergin and Rogers in one division in the east, and Drs. Williams and Fulton in another division in the west. This singular and serious (from a certain point of view) condition of things is said to be due to the manipulative skill of certain members of the Defence Association who appeared before a committee during the last meeting of the Ontario Legislature.

It is a matter of deep regret among many friends as well as foes of the council that Dr. Day, of Belleville, so well known for many years as one of the ablest members of that body, has decided not to be a candidate for re-election, because he holds the position of registrar of the county of Hastings. The name of Dr. Gibson, of Belleville, has been mentioned as his successor.

We think it will not be difficult to give a correct forecast as far as Toronto is concerned. Dr. Arthur Jukes Johnson will probably be re-elected as a member for a new division, that is, the western portion of Toronto, which forms only a part of his former constituency; in fact, it seems doubtful if he will meet with any serious opposition. For the eastern division of Toronto, Dr. E. J. Barrick is likely to be the representative. The fact that his nomination paper has been signed by a considerable majority of the electors precludes the possibility of the success of any would-be opponent. Dr. James Thorburn, the representative of the Toronto School of Medicine, and Dr. William Britton, the representative of the University of Toronto, have proved themselves such capable and efficient members that, so far as we know, it seems to be a matter of course that they will be re-elected.

A SURGEON OF FORMER TIMES.

AMONG the greatest of American surgeons was Dr. Dudley, who practised during the first half of this century in Lexington, Kentucky. His record is, in many respects, a remarkable one. He performed the operation of lateral lithotomy two hundred and twenty-five times with the loss of only three cases, and was equally successfully in various other branches of surgery. We learn from Dr. Bedford Brown's memorial address, delivered last year in Louisville at the meeting of the Southern Surgical and Gynecological Association, that Dr. Dudley, after graduating in Pennsylvania University, spent four years in the schools and hospitals of Paris and London, where he had the advantages of the teachings of such surgeons as Baron Larrey, Sir Astley Cooper, and Abernethy. His methods in preparing his patients for operation, and practising asepsis in its most minute details, were remarkably like those of our most careful and scientific surgeons of the present day. We cannot do better than quote Dr. Brown's words: "While in these times bacteriology was a science unknown, and sepsis and antisepsis were things unheard of, Dudley understood the principles of asepsis, and he knew that all dirt and filth contained the seeds of disease, and to place his patient beyond the pale of disease was to preserve him in an absolute state of cleanliness." He took

the greatest pains, in preparing his patient, to see first that the general health was as good as possible, and that the various secreting and excreting organs were normal. The patient was always thoroughly cleansed by means of soap and warm water. All instruments and other articles which came in contact with the patient were cleansed with warm water.

All sorts of wounds and injuries were treated by copious applications of hot water, such applications being continued sometimes for hours. The operator and assistants were expected to make themselves thoroughly clean by the free use of hot water and soap. In all cases the hot water had previously been boiled for a considerable length of time. Unfavorable results, such as suppurative fever, erysipelas, or gangrene, Dr. Brown says, were unknown in his practice.

Are the methods of to-day better than those of Dr. Dudley fifty years ago? Why is it that methods so simple, and yet so effective, were not more generally carried out at an intervening period, say, twenty-five years ago? Will our aseptic and antiseptic methods of to-day be forgotten in twenty-five or fifty years hence? We will not attempt to answer all these questions, but simply express the hope that our knowledge of the ways to prevent septicemia to-day, being founded on definite scientific principles, will not, in the future, be replaced by ignorance of such life-saving methods.

Another remarkable thing in the practice of Dr. Dudley was the fact that he treated peritonitis more than half a century ago by the administration of cathartics alone, *i.e.*, the method now in vogue amongst the majority of practitioners.

RECIPROCITY IN MEDICAL REGISTRATION.

WE publish in this issue a letter from a correspondent on "Reciprocity in Medical Registration." The opinions expressed deserve consideration, although they are by no means new. It seems to be not generally known, or at least appreciated, that a very important conference was held in Ottawa in September of last year, where this knotty question was discussed in all its aspects. There were present representatives of the medical councils of Ontario, Quebec, and British Columbia, together with a representative from the Northwest Territories.

There was a general consensus of opinion that reciprocity was desirable, and a hope expressed that it might be obtained in the not distant future. The delegates generally favored the adoption, in each of the provinces, of a medical act similar to that of Ontario. The following resolutions were carried unanimously: "(1) That in the opinion, of this conference there

should be especially, in each province in Canada, a central examining board to examine all candidates for medical registration therein. (2) That, as soon as a central examining board is formed in each province, a committee should be appointed from each provincial medical council in order to have established a uniform standard of matriculation and of medical education throughout Canada, and also reciprocity between the provinces in regard to medical registration."

The principal obstacle exists in Quebec, where the universities are opposed or object to handing over their licensing powers to a central examining board. At the last session of the Quebec Parliament, a motion to establish such an examining board was defeated by a majority of one. We understand that the matter will again be brought up at the next session of the legislature, when it is hoped that an act will be passed similar to that of Ontario. With such an act in force in Quebec, there is reason to believe that machinery can soon be set in motion by which there will be established the much-desired reciprocity in medical registration. The Ontario Medical Council has already passed a statute with this desirable object in view, as follows: "When and as soon as it appears that there has been established a 'central examining board' similar to that constituted by this act, or an institution duly recognized by the legislature of any of the provinces forming the Dominion of Canada, other than Ontario, as the sole examining body for the purpose of granting certificates of qualification, and wherein the curriculum is equal to that established in Ontario, the holder of any such certificate shall, upon due proof, be entitled to registration by the council of Ontario, if the same privilege is accorded by such examining board or institution to those holding certificates in Ontario."

Correspondence.

A DOMINION LICENSING BODY.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—It is strange that no definite action has been decided on regarding the license for practising medicine in the Dominion of Canada. From Atlantic to Pacific, the individual states forming the Dominion contain many medical men of intelligence who are anxious to see a standard

adopted that will allow each properly educated doctor to practise in his own country. Surely a doctor can ask no less?

From a letter from Dr. Macneill in the *Maritime Medical News* for June, 1893, I extract the following: "What is required is uniformity and fusion of standards in the various provinces of this Dominion—their reciprocity by the various councils, so that a man who has been years in practice in Nova Scotia can carry credentials with him that will be accepted in Ontario or British Columbia, or any other province of the Dominion. The possession of diplomas of England or Scotland is no barrier to quackery, and in this Dominion the existing laws have done much good in the suppression of quacks and quackery, but there is a great deal to be done yet. We require the assistance of every intelligent man to set legislatures and people right in this matter. Cease from calling our efforts a monopoly, and advocate higher and uniform laws regarding medical education, so that all interprovincial friction in these matters will cease, and be a thing of the past. Then the doctor who desires to go to the Pacific coast will have a passport from the Nova Scotia council that will admit him as readily as a demit from one church to another church.

"The Maritime Medical Association for the maritime provinces will meet this year at Charlottetown. This question may come before it, and much may be done by it to disseminate sounder views on the changes and modifications required in the medical laws of the three provinces."

These words are full of truth, and excellent as far as they go, but the difficulty is that in the past action has ended in nothing but words. Motion after motion has been carried in different medical bodies regarding this matter, but the only way in which it can be carried out is by direct representation on a committee of delegates from the different licensing bodies, such committee to meet in Ottawa, and the delegates sent with full power to act for the provincial licensing bodies represented by them. The expenses of such delegates should be paid by the licensing bodies for the time consumed in the general conference, and expenses of travel. There should be considerable give and take in such a meeting, and the result of their conference, after having been thoroughly outlined and adopted, should be laid before the Dominion Government. Committees from medical societies are worse than useless, because they are not clothed with authority from the licensing bodies themselves. I hope that this conference may be brought about in the near future, and that then every practitioner who is duly qualified to practise in his own locality will be able to practise without let or hindrance in any part of this fair Dominion.

MEDICUS.

THE QUESTION OF ALCOHOL IN TREATMENT
OF DISEASE.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—In your issue of October you publish such a report of my remarks on Dr. Harrison's paper on alcohol that I fear any one reading it will think I have taken leave of my senses. I therefore request that you will do me the favor to allow me to correct any such impression.

As your readers will see, Dr. Harrison had introduced the subject in an excellent article, entitled, "Is alcohol in all cases, and in all doses, a sedative and depressant?" I took exception to this statement of the question, as no drug ever did or ever could be expected to act exactly alike in all cases, and under every circumstance. I said that even water or milk under certain circumstances proved very harmful. I said that the profession are divided over a question which is not an absurdity, but the plain, simple question, Is the general action of alcohol that of a stimulant or a sedative? In other words, does alcohol stimulate and strengthen a patient, or does it merely produce a false appearance of improvement by rendering the patient less sensitive to morbid impressions? I said that not only was the general profession divided, but that eminent authors are divided, and that even hospitals are divided; as, for instance, the temperance hospital in London, England, and another in Chicago. In proof that those holding the stimulant theory do not have it all their own way, I pointed to the paper by Professor Wilkes, of Guy's Hospital, read before the British Medical Association in 1891, in which he says: "Those medical men who, according to preconceived or ancient notions, have styled alcohol a stimulant have really been watching its sedative action." I remarked that during the spirited discussion which followed, no one questioned this statement. Hundreds of medical men, especially in the old country, hold the sedative theory, as well as very many of the profession in this country.

To show that the authors are divided, I pointed to "Whitla's *Materia Medica and Therapeutics*," now held to be one of the best, if not the best, book on the subject for students. It says: "We will never understand the action of alcohol as long as we regard it as a stimulant."

I might also have cited among the authors Dr. B. W. Richardson, who has expended more time and labor over the question than any other man, living or dead. Also Dr. Norman Kerr, of London; Dr. Davis, of Chicago, author of "*Principles and Practice of Medicine*"; and many others of less note.

I also tried to point out that whilst many would agree that alcohol is a sedative, as evidenced by their prescribing it to procure sleep or to soothe

an excited nervous system, yet these very men would prescribe it as a stimulant in the next case to which they were called. The same babel of ideas was exhibited during the discussion of Dr. Harrison's paper. One distinguished professor said that alcohol acted as a stimulant, a narcotic, and an anodyne all in the same case and at the same time. There may be reason in this, but it lies too deep for me. It reminds me of the Irishman who invented a gun to shoot out of both ends, but when he had it completed he never could be sure which end it would go off at. I pointed out this confusion of ideas, and urged for free, full, and kindly discussion.

The truth seems to be that those who hold such views, when they want a narcotic effect, prescribe alcohol; when they want a stimulant effect, they prescribe alcohol; and when they would soothe pain, they prescribe alcohol—like the juggler, who will give you any kind of drink you call for out of one bottle. Of course, there is no authority for such loose views, as most of the old authors manfully take the stand that alcohol is a food and a stimulant. It requires little reflection to see that this will not hold water; for surely, if it be a food and a stimulant, it should be valuable in all tests of endurance.

Yet Ringer says: "Varied, repeated, severe, and prolonged experience and the testimony of army medical men prove that troops endure fatigue and the extremes of climate better if alcohol is altogether abstained from." Many other quotations might be given to show the inconsistency of those who advocate the stimulant theory.

I would here also take exception to Dr. Harrison's statement that he "finds a considerable number of conscientious and able medical men who claim that alcohol is not of the slightest use in the cases in which we have been in the habit of prescribing it; that it is not only not a stimulant, but a powerful sedative and depressant." The statement is self-contradictory. I presume that all medical men agree that sedatives are frequently useful. How, then, could any one, after admitting that alcohol is a powerful sedative, claim that it is of no use? I think the doctor has misunderstood what was meant.

I know that there are many able men who claim that even as a sedative or narcotic alcohol is inferior to others which we have at our command. Those who have embraced the sedative theory have generally done so after years of painful groping for the truth, and will not be found to be entirely devoid of intelligence. The main argument on which the stimulant theory rests is that of individual experience, than which I claim there is nothing more delusive. It has nothing more than a suggestive or confirmatory value. While individual experience is one of the tests to which every question must be submitted, yet it is only one, and that one of the least importance. All sorts of absurdities have found refuge under

its wings ; such as Chaulmoogra oil, Chian turpentine, elixir of life, etc., etc.

Why did profuse bleeding hold its own so long ? Because the experience of the patient and the physician showed that it gave relief to present suffering. And it would have held its own yet if a clever mind had not demonstrated that a much larger number died of those who were bled than of those who were not.

Let a similar test be applied to alcohol ; have a hundred cases of a certain disease treated with the ordinary doses of alcohol, and a similar number without. I, for one, will bow to a test like that, if fairly conducted. I would also bow to clinical experience if it were backed by reason ; but individual experience alone, which for ages refused a mouthful of cold water to a fever-parched patient and sheltered so many abominations as cures, I must decline to follow blindly. Dr. Harrison has rather an original argument to which I wish to direct attention. He says " When your patient is nearly moribund, when it is evident that the weight of a feather thrown into the wrong scale must be fatal, and you give a decided dose of brandy, if brandy be a sedative, its effects must necessarily be fatal. The mere fact that the patient rallies under its effects in this frightfully low condition shows that it cannot be a depressant." I must admit that the doctor has prognosis down to a finer point than any other man I ever saw when he can tell to a feather's weight how near a patient is to death.

I have seen a number of able and experienced practitioners at a patient's bedside decide that there was not the slightest chance of recovery, and yet they were wrong ; and *vice versa*.

The assured way in which he speaks of patients so nearly dead being snatched from the grave by alcohol would lead young practitioners to believe that many patients at death's door will recover if they administer brandy enough. Allow me to tell them that I tried that dodge for many years, and it fooled me every time. Up till a few years ago few of my patients went to heaven sober, yet I failed to observe in any single case such a marvellous result. And now I think I see more patients rescued simply by conserving the powers of nature. But that is only my " individual experience." Moreover, the doctor has not told us of what his patients were dying. If it were of nervous shock, I might be inclined to agree with him that alcohol might seem to do good, and in some cases have real value. But a patient dying of exhaustion of the forces of nature can hardly be helped by the administration of a drug which will cause a well man to stagger, or even put him asleep.

Sir William Gull, in 1877, said : " The advantage of alcohol is its effect on the nervous system, for the time being rendering the patient more

indifferent to the process going on." And the Encyclopedia Britannica says: "Alcohol relieves weariness by paralyzing the power to feel it." So, in a similar manner, does alcohol cause a patient to feel better by taking away or diminishing, for the time, his power to feel the unpleasant effects of the disease. I grant that in this way it may occasionally be useful when given for a short time only, but, when given for a length of time, I believe it does a great deal of harm; and when we require a sedative we have others which, in most cases, are far superior to alcohol. I trust I have said nothing which could give offence to the gentleman who was so good as to introduce the subject and to devote so much care to it. My only desire is to set myself right, and to have this subject thoroughly ventilated.

London, October 26th, 1893.

H. ARNOTT.

Book Reviews.

THAT admirable medical quarterly, the *Sheffield Medical Journal*, was successful beyond all expectations during the first year of its existence, and in the second year has expanded into *The Quarterly Medical Journal* for Yorkshire and the adjoining counties.

Books received too late for review :

- A SYSTEM OF GENITO-URINARY DISEASE, SYPHILOLOGY, AND DERMATOLOGY. By various authors. Edited by Prince A. Morrow, A.M., M.D. In three volumes. Published by D. Appleton & Co., New York. Toronto agency, Geo. N. Morany, 63 Yonge street. Subscription only. Volume II., "Syphilology."

AMERICAN TEXT-BOOK OF GYNECOLOGY.

Mr. W. B. Saunders, publisher, of Philadelphia, Pa., announces this work as ready for early issue. It is the joint work of Drs. Howard Kelley, Pryor, Byford, Baldy, Tuttle, and other well-known gynecologists. The work will contain operations not before described in any book, and will be well illustrated.

SUPPLEMENT TO THE REFERENCE HANDBOOK OF THE MEDICAL SCIENCES.

By various authors. Illustrated by chromo-lithographs and fine wood engravings. Edited by Albert H. Buck, M.D., New York city. New York: William Wood & Company, 10th street. Subscription only.

This supplement is really up to date. Many of the subjects written upon in the former volumes have been much dilated upon in this number, and many that were omitted from the original eight volumes have been taken up in this.

Several Canadians have contributed articles, amongst whom we noticed Dr. J. E. Graham, M.R.C.P., London, Dr. Beaumont Small, Dr. A. D. Blackadder, Dr. W. H. Hingston, Dr. Wesley Mills, and Dr. Wyatt Johnston. Even to this supplement an addendum has been added on plasmodia malaria, which carries the subject complete to the end of 1892. Every subscriber for the Reference Handbook will, undoubtedly, be pleased to know that the publishers have issued the supplement, and complete the set by subscribing at once.

A HANDBOOK OF OPHTHALMIC SCIENCE AND PRACTICE. By Henry E. Juler, F.R.C.S., Ophthalmic Surgeon to St. Mary's Hospital; Surgeon to the Royal Westminster Ophthalmic Hospital, London. New (second) edition, revised and enlarged. In one handsome octavo volume of 562 pages, with 201 engravings, 17 colored plates, test-types, and color-blindness test. Cloth, \$5.50; leather, \$6.50.

This new work on the eye is, it is gladly noticed, filled with illustrations, so to speak. In describing the diseases of the various parts of the eye, an object demonstration is given in the form of an illustration, clearly cut and fully described. This is one great merit of the book, and it is in this respect superior to many lately published works on the eye. The divisions and subdivisions under which the different diseases are taught are clear and not too redundant, avoiding in this way repetition and confusion. The author has evidently made every effort to meet the wants that have been expressed as present in the works of different authors as fully as possible in a work of this size. It is especially adapted to the needs of the general physician and medical student. The concise, yet clear, description of disease and its treatment, the clear type, its portable size, its many and good illustrations, and the fullness of the index, are some of the grounds on which it asks for and should be given the liberal support of the profession.

LEONARD'S PHYSICIAN'S POCKET DAY-BOOK. Bound in red morocco, with flap, pocket, and pencil loop. Price, postpaid, \$1.00. Published annually by the *Illustrated Medical Journal Co.*, Detroit, Mich.

This popular day-book is now in its sixteenth year of publication. It is good for thirteen months from the first of any month that it may be begun, and accommodates charges for fifty patients daily for that time, besides having cash department, and complete obstetric records. There is space for the diagnosis of each case, or for brief records of the treatment adopted, following each name-space. Name of each patient needs to be written but three times in a month. It has the usual printed matter, such as: Dose List; Poisons and Antidotes; Urinary Tests; Exanthematicæ; Disinfectants; Weights and Measures. The book is $7\frac{1}{2}$ inches long and $3\frac{1}{2}$ inches wide, so that it will carry bill-heads or currency bills without folding. It is bound in flexible covers, and weighs but five ounces, so that it is easily carried in the pocket.

The style and make-up of this compact little day-book is just what the busy physician needs. The writer has used for the past eight years in his regular practice the larger size day-book, and can speak from experience. It is one that has all the necessary space for any information you need to accurately post from to your ledger. At this season of the year, when a change may be beneficial, we feel sure that a trial of Leonard's system will fill the need.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Volume V. Fifth session. Held at Louisville, Kentucky, on November 16th, 17th, and 18th, 1892.

The Southern Surgical and Gynecological Society is an admirable society, and, though young in years, its work will compare favorably with that of any medical or surgical society in the world. The fifth volume, containing four hundred and twenty-eight pages of reading matter, is fully equal, if not superior, to any which have preceded it. It contains the excellent address of the president, Dr. J. M. McFadden Gaston, of Atlanta, Georgia, and a number of interesting papers on subjects surgical and gynecological, with accompanying discussions conducted with marked ability.

One of the most interesting papers presented was that of Dr. Bedford Brown, of Alexandria, Virginia, the president for the coming year, the subject being "Personal Recollections of the late Dr. Benjamin W. Dudley, of Lexington, Ky., and of his Surgical Methods and Works," to which reference is made in another column. The members of the association were so well pleased with Dr. Brown's address that they decided to allot a place in the "Transactions" for the purpose of recording the works and deeds of prominent Southern men, and appoint one of the fellows each year to prepare a memorial address to the memory and career of some deceased eminent surgeon or gynecologist. They selected Dr. McMurtry, of Louisville, to deliver such tribute to Dr. Ephraim McDowell at the next meeting to be held this month in the city of New Orleans. A happy custom has thus been inaugurated, and it is likely that in the future the memorial address will be among the most interesting features of their annual meetings. The association is fortunate in retaining the services of Dr. W. E. B. Davis, of Birmingham, Alabama, as secretary. His great executive ability, untiring energy, and genial manners have done much toward placing the organization in the distinguished position which it now occupies.

A DICTIONARY OF MEDICAL SCIENCE. Containing a full explanation of the various subjects and terms of anatomy, physiology, medical chemistry, pharmacy, pharmacology, therapeutics, medicine, hygiene, dietetics, pathology, surgery, bacteriology, ophthalmology, otology, laryngology, dermatology, gynecology, obstetrics, pediatrics, medical jurisprudence, and dentistry, etc. By Robley Dunglison, M.D., LL.D., late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. New (21st) edition, thoroughly revised, greatly enlarged and improved, with the pronunciation, accentuation, and derivation of the terms. In one magnificent imperial octavo volume of 1181 pages. Cloth, \$7; leather, \$8. Philadelphia: Lea Brothers & Co., 1893.

Any book that from public demand and appreciation reaches a twenty-first edition may safely be recognized as a credit to both its author and publisher. Dunglison's Medical Dictionary has reached that high position. It was always a favorite; the definitions were accurate, clear, and concise, making it an easy, yet thorough, book for the busy student or practitioner to refresh his memory from. There have been some improvements made in this edition. Pronunciation is now for the first time introduced. It is indicated by a simple and obvious system of phonetic spelling, fully explained in the introduction. Derivation has

been expanded, and Greek derivations are printed in English letters, and thus an acquaintance with the Greek alphabet is unnecessary as a key to the knowledge afforded by derivation. Definitions have always distinguished the work as a most valuable feature ; it has been systematized in this edition ; for instance : Chemistry, formulæ and properties ; Drugs, preparation, doses, and effects ; Poisons, symptoms, treatment, and antidotes, etc., etc. A vast amount of information will be found in the compiled tables, etc. The work should be in the hands of every student and physician, and will be found a most useful companion.

A MANUAL OF MEDICAL TREATMENT OR CLINICAL THERAPEUTICS. By J. Burney Yeo, M.D., F.R.C.P., Professor of Clinical Therapeutics in King's College, London, and Physician to King's College Hospital. With illustrations ; in two volumes, 630 and 740 pages. Philadelphia : Lea Brothers & Co., 1893.

This work is one that should be in every physician's hands. It is based on the proper method of therapeutics. The study of disease is pursued from the point of view of treatment ; the therapeutic effect of drugs is worked out rationally from the study of disease. We quote a paragraph from the preface : " It is by examining into the mode of *causation* of disease by investigating the true nature of the morbid changes what underlie the *phenomena* of disease, and by an exact knowledge of the properties and mode of action of the agencies we introduce for the purpose of influencing favorably the course, that what are termed *rational indications* for treatment are arrived at." The foundation for the work was the author's clinical experience in King's College Hospital. The work is not intended as a "rapid reference," but is one that will require to be pondered over and digested. Volume I. is divided into three parts. The first takes up the treatment of diseases of the organs of digestion ; second, treatment of diseases of the heart and blood vessels, and of the blood and ductless glands ; third, the treatment of diseases of the organs of respiration. Volume II. is divided into six parts. First, the treatment of phthisic or consumption. In this part Dr. Yeo's great clinical experience in Brompton Hospital stands him in good service. He was always recognized as a keen diagnostician, and his treatment was always rational, yet advanced. The treatment of diseases of the liver, the treatment of urinary and renal affections, diseases of the nervous system, constitutional diseases, and specific infective diseases all follow in succession. The whole is a work on which the author should be congratulated, and the profession should show their appreciation by rapidly exhausting the edition. The publishers have done all in their power to make the work attractive ; the type is pleasant to the eye, the press work clean, and the binding neat and durable.

Medical Items.

DR. P. D. WOODS, of London, was in the city this month.

DR. GOWAN FERGUSON, of Grand Forks, Dakota, was in town in October.

MR. CHARLES CLAY, of Manchester, England, died September 19th at the age of ninety-one.

DR. JAMES F. BELL, of Portland, Oregon, was in Toronto visiting his relatives last month.

DR. CHARLES H. FISHER, secretary of the Rhode Island State Board of Health, died October 21st.

DR. E. P. GORDON, formerly of the C.P.R. ss. *Empress of Japan*, is spending a few weeks in Toronto.

DR. J. W. E. BROWN, formerly house surgeon at the Toronto General Hospital, is about to locate in Toronto.

THE infant daughter, and only child, of Dr. L. M. Sweetnam, Toronto, died October 29, after a short illness.

DR. JOHNSTON SYMINGTON, of Edinburgh, has been appointed professor of anatomy in the Queen's College, Belfast.

DR. J. A. C. GRANT, formerly house physician at the Home for Incurables, has gone to England for a post-graduate course.

MRS. WARDLAW, wife of Dr. James S. Wardlaw, Galt, and daughter of Dr. J. B. Lundy, Preston, died in Galt, October 22.

SIR JOSEPH LISTER delivered an address on "Essentials in Antiseptic Treatment" before the King's College Society, October 7.

THE Bradshawe lecture before the Royal College of Surgeons, England, will be delivered by Sir William MacCormac, December 7th.

DR. E. P. GORDON (Victoria, 1890) paid a visit to his friends in Toronto in the latter part of October. We understand he intends to practise in British Columbia.

THE total number of medical students in the universities of the German Empire in the summer semester of 1893 was eight thousand eight hundred and thirty-eight.

SIR ANDREW CLARK, London, England, was suddenly seized with apoplexy on October 20th. He was conversing with a patient in his office at the time, and two days previously had occupied the chair as president of the Royal College of Physicians on the occasion of the Harveian oration.

At the two hundred and eighty-third regular meeting of the Clinical Society of Maryland the following officers were elected for the ensuing year : President, Dr. J. Edwin Michael ; vice-president, Dr. Herbert Harlan ; recording secretary, Dr. H. C. Reid ; corresponding secretary, Dr. Wm. T. Watson.

DR. LACHAPELLE, of Montreal, has been elected president of the American Public Health Association, which will hold its annual meeting for next year in Montreal. We congratulate Dr. Lachapelle, and join in the appreciation of the honor done to Canada in again selecting one of its cities as the meeting place of this large and influential association, and electing a Canadian to preside.

THE SOCIETY OF ANESTHETISTS.—A society with the above designation has been organized in London, England, with the object of undertaking "valuable work upon the science, and improving the practice of anesthetics, as well as such subjects that are germane." The officers elected are : President, Mr. Woodhouse Braine ; treasurer, Dr. Dudley Buxton ; secretary, Dr. Silk ; council, Messrs. Stallard and Norton.

DR. GRAILY HEWITT, so well known as one of London's most distinguished gynecologists, died August 27. For some years he had suffered from asthma and bronchitis, and last year he relinquished practice on the advice of his friends, and spent the winter in Egypt. During the last few months symptoms of renal disease developed, and culminated in an attack of uremia, which soon proved fatal.

In the September number of the *Maritime Medical News*, in an editorial, we find the following : "Canadian Medical Association meets at London, Ontario, on the 20th and 21st of September next. In the selection of a place for the meeting of '94 the claims of the maritime provinces should not be overlooked, as nearly twenty years have elapsed since the association has met in this section of Canada." The maritime provinces will be pleased to know that St. John, New Brunswick, has been selected as the next place of meeting of this association.

PIXOL, A NEW DISINFECTANT.—The *Lancet's* Russian correspondent cites a report published in a supplement to the *Army Medical Journal*, by Dr. Eberman, on pixol, a cheap disinfectant introduced by Dr. Raptchevski. It is prepared by dissolving a pound of green soap in three pounds of tar, and slowly adding a solution of a little over three ounces and a half of either potash or soda in three pounds of water. At the time of using, one part of the syrupy liquid thus formed is added to nineteen parts of water, forming a five-per-cent. solution of pixol, and it is used of this strength for disinfecting linen and for washing the hands ; for the disinfection of dejecta a ten-per-cent. solution is recommended. Such a solution has been proved to be fatal to the *Bacillus anthracis*, to the bacilli of typhoid fever and cholera, and to the cocci of sup-puration. It is said that the preparation costs only about two cents a pound.
—*New York Medical Journal*.

VICARIOUS SYMPTOMS.—The Wife :—"There is a prescription that the doctor left for you to-day when he called and found you out."

The Husband :—"How did he know what to give me?"

The Wife :—"He said that from my appearance and symptoms he knew you were suffering from chronic dyspepsia."

LAST year much joy was given to the Parisians by a man with a musical anus. This year medicine supplies the curiosity. At the close of the Congress for the Advancement of Science the members of the Section of Medicine had a banquet. At dessert the "venerable Dr. Schiff, of Geneva, who presided," entertained the company by playing the "Marseillaise" with the abductor muscles of his feet. Strong rhythmic contractions produced a sound audible for two or three metres. He is said to be the only possessor of this accomplishment in society, which, however, does not prevent him from being a gallant gentleman and a scholar—*Au contraire!*—*Cor. Boston Medical and Surgical Journal.*

COUNCIL FINAL EXAMINATION.—The following candidates have passed the final examination of the College of Physicians and Surgeons of Ontario held in September, 1893: N. Anderson, Toronto; J. M. Armstrong, Walton; W. J. Arnott, Toronto; J. J. P. Armstrong, Moore; H. H. Alger, Colborne; A. N. Barker, Seeley's Bay; W. E. Brown, Rush, N.Y., U.S.A.; R. T. Corbett, Toronto; C. Carter, Toronto; Annie E. Carveth, Toronto; D. J. Dunn, Rosemont; J. R. Ferguson, Toronto; G. S. Glassco, Hamilton; E. W. Goode, Toronto; F. E. Grant, Richmond Hill; M. Haight, New Durham; J. P. Hubbard, Thamesford; J. E. King, Elder's Mills; James King, St. Thomas; S. H. Large, King City; L. Lapp, Toronto; R. B. Mackay, Toronto; J. A. Mitchell, Caistorville; J. A. McNaughton, Cornwall; W. F. Park, Chatham; F. G. E. Pearson, Weston; F. S. Ruttan, Sydenham; Eva J. Ryan, Trafalgar; W. P. Thompson, Toronto; P. B. Wood, London.

THE OLD COUNTRY DOCTOR.—The following pen picture is taken from *The Christian Herald*, the journal edited by the Rev. Dr. Talmage. It is not signed with his name, but it bears an exceedingly close resemblance to his writing. Especially worthy of the eloquent divine is his peroration, where he says of the overworked old country doctor: "He deserves every kindness at our hands."

"Our country physicians," says he, "have so many hardships, so many interruptions, so many annoyances, that I am glad they have so many encouragements. All doors open to them. They are welcome to mansion and to cot. Little children shout when they see them coming down the road, and the aged, recognizing the step, look up and say, 'Doctor, is that you?' They stand between our families and the grave, fighting back the troops of disorder that come up from their encampment by the cold river. No one hears such thanks as the doctor hears. They are eyes to the blind, they are feet to the lame, their path is strewn with the benedictions of those whom they have befriended. One day there was a dreadful foreboding in our house. All hope was gone.

The doctor came four times that day. The children put away their toys and all walked on tiptoe, and at the least sound said 'Hush !' How loudly the clock did tick, and how the banister creaked, though we tried to keep it so still ! That night the doctor stayed all night. He concentrated all his skill upon the sufferer. At last the restlessness of the sufferer subsided into a calm, sweet slumber, and the doctor looked up and smiled, and said : ' The crisis is past.' When propped up with pillows, in the easy chair, she sat, and the south wind tried to blow a rose-leaf into the faded cheek, and the children brought flowers—the one a red clover top, the other a violet from the lawn—to the lap of the convalescent, and Bertha stood on a high chair with a brush smoothing her mother's hair, and we were told in a day or two she might ride out, joy came back to our house.

"And as we helped the old country doctor into his gig, we noticed not that the step was broken, or the horse stiff in the knees, and we all realized for the first time in our life what doctors were worth. Encourage them. They deserve every kindness at our hands."—*New York Medical Journal*.

OBITUARY.

EDWARD W. MCGUYRE, M.D.—Dr. McGuyre was a resident of Guelph, where he practised medicine for about thirty years. He was highly respected by all classes, and was an active and worthy citizen until six months ago, when his mind became unhinged, and he was removed to the Toronto Asylum. He died in the Asylum, October 26, and the remains were taken to Guelph on the following day, and interred in the Union Cemetery.

THOS. A. FERGUSON, M.D.—Dr. T. A. Ferguson, during his student days, took his course in the Toronto School of Medicine and Medical Faculty of the University of Toronto ; and became a member of the College of Physicians and Surgeons of Ontario in 1888. From that time he practised medicine in Parkdale until a few weeks before his death, which occurred October 14. He was highly successful in practice, and very popular among his acquaintances. He left a widow and one child.

SIR ANDREW CLARK.—Among all the distinguished physicians of foreign countries, probably none was so well known to Canadians as Sir Andrew Clark, of London, Eng. When news was received by cable that he had been seized with apoplexy on October 19th, it caused a feeling of profound regret in this country. From the medical journals since received, we learn that he was attacked with right hemiplegia and aphasia, with some mental confusion, but not actual loss of consciousness. For some days Cheyne-Stokes' respiration was present, but passed away completely. At the end of a week his condition was so much improved that recovery was hoped for. Serious symptoms, however, appeared a few days after, the nature of which we do not know exactly at the time of writing. All hope was abandoned on November 5th, and on the afternoon of November 6th he breathed his last, at the age of sixty-seven.

He received his education at Aberdeen and Edinburgh, and passed all his examinations with high honors. As a practitioner in the metropolis he was remarkably successful, and in 1883 was created a baronet. The *British Medi-*

al Journal thus speaks of him : " Sympathetic, public-spirited, indefatigable in the fulfilment of official duties, as all his private obligations ; profusely generous, with a wide tolerance bred of large understanding, but never tinted with indifference ; wise in counsel, free and fearless of speech, self-sacrificing, and spending himself all too freely in the service of his profession and his fellows, Sir Andrew Clark has risen from the ranks to the head of his profession by force of character, capacity, and unwearied industry, with a record unsullied in thought or act by a tinge of self-seeking."

DR. W. R. SHAW.—Dr. W. R. Shaw died at Brantford on September 10th, after an illness, due to tuberculosis, extending over a year and a half. He graduated with the degree of M.D. from the University of Victoria in 1887, and in 1888 obtained the license of the R.C.P., London. After a general course in several of the London hospitals, he became resident physician in the Victoria Park Hospital for diseases of the chest, and of the East London Hospital for children, in both of which positions he performed his duties with a fidelity that won unstinted praise from the visiting staffs of the two hospitals. His special studies were chest diseases of children, and in these departments his attainments were of the highest order, Dr. Eustace Smith describing him as "an expert upon the subject of disease in early life." Returning to America in 1889, he spent a year in studying pathology and bacteriology in the Johns Hopkins University Hospital, and, at the same time, continued his studies in diseases of children under the accomplished specialist in that department, Dr. W. D. Booker. In 1890, he commenced general practice in Toronto, with the intention of finally devoting himself to his specialty, diseases of children. He continued his studies in pathology and bacteriology, giving to these subjects several hours of work daily in the University Biological Department, and of the several investigations which he undertook then two led to results which he reported in papers in *THE PRACTITIONER* and in the *Transactions of the Canadian Institute*. The subjects of these were the pathology of molluscum contagiosum, and of the disease of peaches, known as the "Yellows," and his publications on these show that science has lost a careful, painstaking investigator. His record of attainments and of worth further indicates that, had he lived, a career such as is not ordinarily promised to the young practitioner would certainly have been his. All hopes were cut short, however, by an illness, to stay which residence in the Northwest and in California was of no avail.

To those with whom he was intimately acquainted, Dr. Shaw showed himself to be a warm-hearted, generous, manly friend ; and it is, perhaps, in this respect that many who were less conversant with his professional attainments, about which he exhibited a remarkable diffidence, will keep him in kindly memory in succeeding years.

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EDITOR:

ADAM H. WRIGHT, B.A., M.D. Tor.

ASSOCIATE EDITORS:

JAMES F. W. ROSS, M.D. Tor.

JOHN CAVEN, B.A., M.D. Tor.

EDMUND E. KING, M.D. Tor.

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POTT'S DISEASE—ITS EARLY DIAGNOSIS AND MECHANICAL TREATMENT.*

BY B. E. MCKENZIE, B.A., M.D.,

Lecturer on Orthopedic Surgery in the Woman's Medical College ; Assistant Demonstrator of Anatomy and Clinical Lecturer on the Surgical Diseases of Children, Toronto University ; Surgeon to the Victoria Hospital for Sick Children ; Member of the American Orthopedic Association.

THE disease of the vertebræ, first well described by Percival Pott, in 1779, is now generally recognized as tubercular.¹ The frequency of its occurrence, the constancy of resulting deformity, and the long duration of the disease make it one of great interest and importance to every practitioner of medicine. In children it occurs more frequently than any other form of bone disease.

As in all tubercular affections, the history is an important aid in making an early diagnosis—the personal of more consequence than the family history. Doubtless the vulnerability of the descendant of tubercular ances-

* Read at the regular meeting of the Toronto Medical Society, Nov. 16th, 1893.

tors is greater than that of one of a healthy parentage. Having a closer bearing, however, upon the vulnerability of the individual is the condition of the system which results from preceding disease or conditions which impair the general health and lower the vitality. Many experiments have been performed upon animals showing that after injection of the virus of tuberculosis the liability to development of the disease is increased by injury, such as fracture of bones, wounds of joints, and by unsanitary conditions of living.²

Clinically, it will be found that in a large proportion of cases the appearance of the disease has been preceded by some illness, such as measles, scarlet fever, whooping cough, chronic diarrhea. These lower the resisting power of the individual, and the virus, which otherwise could have been successfully thrown off or held in check, finds a suitable soil for development.

Always of prime importance that an early diagnosis should be made, it is especially so in tubercular affections of the joints.

SYMPTOMS.

(1) The carriage of the individual in moving about is likely to be one of the first indications of this affection. At a very early date the spine is immobilized by nature in the affected area, and the individual moves about with a cautious gait, and without the natural ease and grace which comes from unconstrained bending of the body.

(2) Pain in the distribution of the nerves which find exit in the immediate vicinity of the diseased vertebræ is a very constant and early symptom. If the lower dorsal or upper lumbar be affected, pain is frequently complained of in the gluteal and upper femoral regions, and the suspicion is often expressed that there is disease of the hip joint. When the tubercular focus is higher up in the spine, it is not uncommon to find the child complaining of "belly-ache"; and treatment for stomach and other visceral derangements is by no means uncommon.

(3) When the back is fully exposed, and the patient allowed to stand on a level surface, without shoes, then voluntary flexion of the spine to the greatest extent permissible, without causing pain, will show what part is affected. Reflex muscular spasm will prevent or lessen movement between inflamed vertebra, just as it lessens or prevents motion at a diseased hip or knee joint.

(4) Deformity³ may reveal the presence of disease and its location. The angular deformity from which the affection often takes its name is not here referred to. When the tubercular process has advanced so far that a kyphosis is present, then aids to the diagnosis are not required, and it is useless to make further examination. Just as deformity is produced

by muscular spasm, as seen in the slight flexion and lordosis of incipient hip disease, long before there is loss of tissue or manifestation of the disease at the surface of the joint, so there are curvatures which manifest themselves before there is any destruction of the bodies of the vertebræ. If the focus of the disease is situated laterally in the vertebral body, then we shall have a lateral curvature ; if situated centrally we may have an antero-posterior curve, which differs much from the characteristic so-called angular curvature so long known as a manifestation of this affection.

(5) The disposition to rest in the recumbent position, or to lean against some support which will relieve the spinal column of the necessity of bearing its superincumbent weight, is not without diagnostic import.

(6) *Chronicity.* If it be found that all the symptoms of illness have come on suddenly, then doubt may well be entertained of the affection being spinal caries. In all the tubercular affections of joints, careful inquiry will show that there is a rather indefinite period of illness marked by vague symptoms, and that there have been periods of exacerbation, the patient seeming to have almost recovered, only to be worse again in a few weeks.

Attention may properly be called to some special symptoms of the different regions.

In the lumbar region there is great liability to consider the case one of hip disease. One side is favored ; there is frequently apparent shortening of one leg and flexion of the thigh. Before any kyphosis appears a tumor may present itself in the iliac region, and reveal the fact that we have a psoas abscess. A complete examination, however, can scarcely fail to show that the symptoms most characteristic of hip disease are absent.

To differentiate between lumbar caries and pyonephrosis, or perinephritis, may be very difficult. An examination of the urine may probably give light on the subject. A perinephritis in children is generally acute, and the symptoms more urgent.

In dorsal caries, especially the upper, the respiration is modified, the outer thoracic walls being more or less immobilized, and the work being done by the diaphragm. Lower down the abdominal symptoms referred to above are very characteristic, and also the desire to rest lying prone.

Disease in the cervical area is very likely to cause a torticollis, which differs from the true wryneck in being associated with greater resistance to passive motion, and by pain when any attempt is made to move the head. The hands may be kept applied to the chin to support the head and keep it steady. When the first and second cervical are affected there is almost always occipital neuralgia. Disease in the region of the fourth or fifth vertebra will probably manifest itself by irregular action of the

diaphragm through involvement of the roots of the phrenic nerve.

When all the foregoing has received full consideration, I am aware that cases may and do still present themselves in which it is the part of wisdom to suspend judgment. In the enumeration of symptoms no reference is here made to such as will not aid in an *early* diagnosis, and only to such as experience has taught the writer to emphasize. In the desire to make an early diagnosis there are certain affections which must be differentiated :

(1) *Rheumatism*. Occasionally persons suffering from rheumatism present symptoms very similar to those detailed above, and if it be a child who is affected there may be great difficulty in making a diagnosis.

CASE 1. Alice G., 3 years old. The family attendant informed me that she had been ill for about two weeks, and that he entertained doubt as to diagnosis. She had no antecedent illness ; had elevation of temperature to about 102° F. Her walk was typical of Pott's disease ; there was no deformity ; could not learn that there was pain in the area of distribution of the spinal nerves. Was very cross, and resisted examination. Diagnosis deferred, and anti-rheumatic remedies given. Early improvement and complete recovery.

(2) *The sensitive or hyperesthetic spine* may simulate organic disease very closely, and time for observation may be required to make a diagnosis certain, but there is generally extreme tenderness in one or more parts over the spinous processes. This is not an indication of caries. There is generally normal mobility, and nervous symptoms are prominent.

CASE 2. February 23, '92, K.P., 24 years, sent to me to have a spinal support applied for Pott's disease. In November, 1890, had much pain in back, neck, and head. Had a convulsion, and several since that time. The spinal pain and tenderness continued. In July, 1891, family attendant discovered a "knuckle," and applied a plaster jacket, from which she derived great comfort. Seen by a doctor in Toronto, who would not exclude Pott's disease, nor assert confidently that it was present. I did not find the knuckle, nor any other positive symptom of caries. I applied a rawhide corset at the request of her physician, which she wore with comfort, her health improving, and convulsions being less frequent. Passed from observation a few months ago ; still wearing the corset, but not presenting any further evidence of disease of the bones. These cases often derive great comfort from a spinal support ; but, if used at all, it should not be long continued, and other means of treatment should be employed.³

CASE 3. May, 1891, E.A., 19 years. Good family history. In 1888 had been thrown from a buggy, falling on her head. Had complained much of pain in neck, arms, and back of head, most marked in

the distribution of the cervical and brachial nerves. At examination with her father, who is a physician, we thought there was an undue projection at the seventh cervical and first dorsal. Pain increased on pressure and movement of the part, and felt most radiating to the shoulder, over the clavicle, and up behind the ear, and sometimes down the left arm. Diagnosis, caries of first dorsal or seventh cervical. Applied a leather jacket with "croquet hoop" support for the head. This was worn for a short time; but the general health being good, the local symptoms less marked, and the apparatus found irksome, its use was soon discontinued. The symptoms have disappeared, and health is good.

TREATMENT.

Probably not more than five per cent. of all cases of Pott's disease are presented for treatment previous to the angular projection of the vertebral spines. Of 196 cases treated in the Hospital for Ruptured and Crippled, New York, only 14 were without angular deformity. If an early diagnosis were made, efficient treatment would prevent much of the deformity which so commonly results.

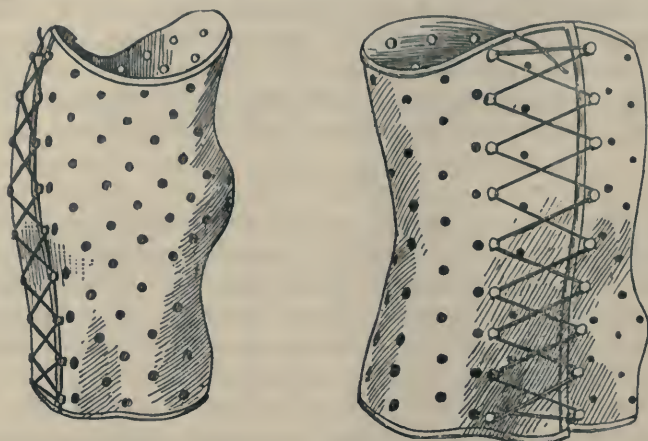
If the disease in its early stage be acute, and always in children under three or four years of age, it is better to treat the case by recumbency. If kept constantly lying down in bed, the superincumbent weight of the body above the seat of disease is removed and deformity partly prevented.

In the opinion of many surgeons, however, it is not wise to continue this method of treatment for any lengthened period; and if the patient is to be allowed to move about, a support of some kind is to be provided, not only to prevent needless deformity, but to fix the spinal column at the seat of disease so as to secure rest for the affected parts.

No support or appliance for the spine has been recommended which is more efficient than the plaster jacket when properly applied. It is the only one which may be made to grasp the pelvis so as to immobilize it in its relation to the spinal column. The exact manner of its application will depend upon the locality of the disease. In cervical and high dorsal caries, no support can be efficient which does not provide for the support of the head. In lumbar disease there is little likelihood of deforming angular curvature, this being opposed by the natural anterior curve of the spine in that region.

If a lateral section be made through the entire column, separating the bodies of the vertebræ from the parts behind composed of compact bone, then we have an anterior and a posterior section. It is the purpose of all mechanical treatment to transmit the weight to the pelvis through the latter, thus avoiding pressure upon the bodies and affording protection to the area affected by disease.

The writer wishes, however, to call attention to rawhide as a substitute for plaster of Paris, not that any new principle is here advocated, but because that the objections to the use of gypsum cannot be urged against rawhide, while all the claims that may be made in favor of plaster of Paris hold good in the case of the rawhide corset.



In preparing for the employment of this corset, the patient is extended in the ordinary manner by means of straps under chin and occiput,¹ the patient pulling upon the rope which passes over the pulley. Straps passing under the shoulders to aid the extension are unnecessary and injurious. They raise the shoulders out of their natural place, and the extension is not so direct and powerful in producing good form as direct extension upon the spine. The patient is not to be raised from the floor, but is to pull himself up sufficiently to make as much extension as can be borne without discomfort. It is noticeable almost uniformly that the patient experiences increased comfort through moderate extension.

Then the body is rubbed over with vaseline, and plaster bandages applied directly to the body, no shirt or dinner pad intervening. If good plaster has been used, it may be cut off at once, as it will have set sufficiently to keep the shape when removed from the body. The cut edges are now brought together, and secured by an ordinary roller bandage passing around the jacket. Plaster of Paris, mixed to the consistency of mortar, is now poured in till the jacket is full, taking the precaution to put some hollow body through the centre, so that it may be removed when the plaster has set, thus greatly hastening the drying of the plaster model. If the bandages have been thoroughly rubbed by the hand while being applied, the model will faithfully represent the body with its most minute depressions and elevations.

When the model is well dried, rawhide previously soaked in water till it is soft is stretched over very tight, and fastened in place with nails. From six to fourteen days are required for the drying of the rawhide, during which process it tends to contract; but, being retained by the nails, it sinks into all the depressions, and leaves the elevations well marked. Before applying the rawhide, the prominences, *e.g.*, the projection of the vertebral spines and of the anterior portion of the iliac crests on the plaster model, are to be made more prominent by adding strips of felt or leather, so that when the dry corset is applied to the body it may not press upon these parts.

The corset may or may not be lined with chamois skin. Running vertically, about one inch apart, on either side of the prominence made by the projecting vertebral spines, are two strips of felt secured to the rawhide, and making constant pressure forward over the vertebræ, while their spines are allowed to pass between these strips, and so avoid the erosion that so frequently results in the use of plaster.

Lacing hooks are applied along the front of the jacket, so that it may be removed as an ordinary corset. Numerous holes may be punched through both rawhide and lining, affording thorough ventilation. For the support of the spine above the sixth dorsal, a head or chin support must be employed, or the case treated by recumbency.

The following claims for the corset may be fairly made:

(1) When brought down well below the iliac crests at the sides, to the pubes in front and to the cleft of the nates behind, it grasps the pelvis more securely, and retains it in its relation to the lumbar vertebræ more perfectly than any other spinal appliance, except its prototype, the spinal jacket, thus preventing lordosis.

(2) If brought well up to the supra-sternal notch in front, it gives effectual support as high up as the sixth dorsal vertebra.

(3) It has the advantage over the plaster jacket that the bony prominences may be more effectually guarded, that the corset may be removed for bathing purposes, and that a corset will last for one or several years, thus avoiding the worry and trouble of the frequent application necessary in the use of plaster of Paris.

(4) It is better than leather because it is much more elastic and retains its shape perfectly, besides being very much lighter.

(5) It is not so warm as poroplastic felt, and retains its shape better.

(6) It is not expensive.

Any instructions regarding mechanical supports would be very incomplete without a reference to the Taylor spinal brace which is here shown, and is so generally known to the profession. It is the only brace for which credit has been claimed on the ground that it has brought about

recession of the deformity. Exerting its pressure by unyielding bars only along the posterior aspect of the spine, and not grasping firmly the pelvis, it fails in giving the completeness of fixation obtained by a cylindrical jacket. Various modifications of the Taylor brace have been made which have increased its efficiency, notably by Shaffer and by Whitman, New York.⁴

When the disease is above the sixth dorsal vertebra, support for the head must be obtained, both to assist in carrying its weight and to maintain unvarying extension. For this means the ordinary jurymast is the least satisfactory means which I have seen employed. A much more efficient support is the "croquet hoop," first used here, so far as I know, by Dr. Primrose, and described in the *British Medical Journal* by Dr. Elliott in 1884. This gives a most satisfactory support, but it interferes with the proper adjustment of the clothing about the neck, and attracts the attention of observers. Whitman's additions to the Taylor brace above referred to are applicable to this corset. They consist in a chin support giving and maintaining extension of the head applied as Shaffer does the same, and of pads applied in front of the tips of the shoulders, preventing the arms from being moved forward, which movement increases the weight pressing downward through the vertebral bodies.

The consideration of operative measures is not touched upon because there is not time to do so, and because that subject is to be brought before the society by Dr. Peters.

I may summarize the teaching here advocated, as follows :

(1) Due attention to the following symptoms and signs will generally enable the surgeon to make a diagnosis before the stage of deformity has come :

- (a) The *clinical history*—noting the *chronicity* of the case.
- (b) The peculiar *carriage* and *gait* in walking.
- (c) Pain in the *distribution of the spinal nerves*.
- (d) *Muscular spasm* in the region affected.
- (e) Lateral or antero-posterior *curvature*, other than that so called *angular curvature* which marks the later stage of the disease.
- (f) The *disposition to recumbency*.

(2) Mechanical treatment, permitting the patient to be out of bed, is preferred in most cases to plans which necessitate recumbency and a life indoors.

(3) The principles embodied in the use of the plaster jacket most fully meet the indications. When necessary to employ a head support, the croquet hoop is one of the best.

(4) Rawhide is a better material to employ than plaster of Paris.

(5) The object sought in immobilizing the spine is primarily to allay

irritation and to lessen physiological activity in the part affected; and, secondarily, to prevent unnecessary deformity.

- (1) Tuberculosis of Bones and Joints; Senn, pp. 4 and 354.
- (2) Ibid, pp. 15-19.
- (3) Lovett in *Boston Medical and Surgical Journal*, July 13, 1893.
- (4) Whitman, Transactions of American Orthopedic Association, vol. v., p. 40.
- (5) *Zeitschrift für Orthopädische Chirurgie*, 1 Band, 1 Heft, p. 1.
- (6) *Annals of Surgery*, vol. x., p. 48, Bartow. *American Journal of the Medical Sciences*, March, 1893, p. 331.

THE NATURE OF INFLAMMATION.*

BY DR. A. F. MCKENZIE.

THE difficulty of getting a satisfactory definition of inflammation is shown by the fact that in some of our best and most recent works on pathology no attempt at a concise definition is made.

In order to learn what ideas were originally associated with the use of the word, we naturally turn to its derivation, and we find that the clinical symptoms of fiery heat and redness and burning pain gave origin to the word; and at the present day these symptoms, together with swelling and perversion or loss of function, variously modified according to the nature and position of the affected part, and the extent and intensity of the diseased process, are the grounds on which we make a diagnosis of inflammation.

In order to teach the histological processes of inflammation, nearly all text-books first describe the normal circulation as seen in the web of a frog's foot when examined under the microscope.

The results of the application of irritants are then described somewhat as follows:

In some cases, according to the irritant used, a temporary contraction of the arteries occurs. In most cases, however, the first effect noticed is an immediate progressive dilatation of the arteries, followed by dilatation of the veins. The blood current is at first increased in rapidity, but soon becomes slower on account of the tendency of the blood corpuscles to adhere to one another and to the walls of the small vessels. Emigration of the white blood corpuscles into the surrounding tissues occurs, accompanied, perhaps, by the passage of a few red ones. At the same time the plasma of the blood transudes through the walls of the vessels and infiltrates the tissues as serum; while by the union of substances contained

* Read before Toronto Medical Society.

in the plasma and the white blood cells fibrin is formed. In this simple manner are elaborated the various inflammatory exudations. The serum is part of the plasma of the blood. The fibrin is produced by the union of the fibrinogen in solution in the blood plasma with substances contained in the white blood corpuscles. The pus cells are emigrated white blood cells. Besides the changes thus described as occurring in the blood vessels and circulation, in some cases the surrounding connective tissue cells take an active part, and by their multiplication are produced new cells, which, at first of small and indifferent type, later assume the characteristics of connective or granulation tissue. If they die, they help to form pus cells. In what has up to the present time been termed chronic interstitial inflammation of the internal organs, constituting such diseases as hepatitis and nephritis, this formation of connective tissue is the principal part of the inflammatory process, there being little or no formation of serum, fibrin, or pus. In a very interesting address delivered before the last meeting of the British Medical Association, Professor Roy said: "I must remind you that the much-abused term inflammation cannot be so freely used as has hitherto been the case, and we must now exclude many pathological processes which, in the past, have been considered and called inflammations. For instance, many of the so-called chronic interstitial inflammations are, we now know, due to local anemia from narrowing of the blood vessels or other cause, whereby the blood supply is rendered insufficient to maintain the relatively active metabolism of certain tissue elements, which are replaced by fibrous tissue, whose nutritive changes are less active. The same is the case with most, if not all, of the parenchymatous inflammations, which are mostly due to malnutrition or chemical destruction of the functionally active tissue elements, and which, in many cases, leads to their being replaced by fibrous tissue; in other words, to interstitial inflammation so-called, following so-called parenchymatous inflammation. We must also exclude from the term those processes of repair where the increased activity simulates the true inflammatory process. Leaving these and other cases aside, we find that at the present day the inflammatory process is narrowed down to the results of a localized invasion of the pathogenic microbes."

This position, which Professor Roy takes, is practically that taken by Senn in his "Principles of Surgery," where he says that true inflammation is always caused by the presence of one or more kinds of pathogenic microbes. The position of these teachers, shortly stated, appears to be, "No microbes—no inflammation." If this dictum is adopted by the authors of our text-books, it will readily be seen that our present terminology of disease will have to be, to a great extent, altered. Concerning interstitial hepatitis or cirrhosis of the liver, the idea has hitherto prevailed

that it was one of the firmly established facts of medicine that the most frequent cause of this condition is the irritative effect on the substance of the liver of the strong solution of alcohol absorbed from the stomach. But as this irritant is a chemical agent, and not a pathogenic microbe, Professor Roy says we should not call the results it produces inflammation.

Eczema is now classified as a simple non-contagious inflammation of the skin, and, as has been shown by Hebra, all the different varieties of it can be produced, or, at least, imitated, by the application to the skin of solutions of croton oil of various strengths. Workers in paint factories, where arsenical preparations are handled, are particularly liable to severe inflammatory affections of the skin. If a person burns a finger by touching the stove, almost immediately the ordinary signs of inflammation commence.

It would be easy to multiply instances where the inflammatory process, at least as we at present understand it, is evidently and directly due to chemical, mechanical, or thermic irritation. It may be urged that even in these cases it is impossible to exclude the action of microbes, but most observers will conclude that, although they may be present, their action is practically *nil*. This is the reasonable conclusion, unless it can be shown that these irritants do not cause inflammation when applied with aseptic precautions. I am not aware of any experiments conducted for the settlement of this point, so far as the application of irritants to the surface of the skin is concerned; but irritant substances such as croton oil in aseptic glass tubes have been inserted underneath the skin with rigid aseptic precautions, and after the healing of the surface wound without suppuration the tubes have been broken. In such cases inflammation resulting in the formation of pus has occurred, but it is stated by some experimenters that this pus is sterile, *i.e.*, it is non-inoculable, and does not contain streptococci, and it is also said to be poisonous to streptococci.

If these experiments are confirmed, they would appear to indicate a very important distinction between inflammation caused by pathogenic microbes and that caused by ordinary irritants. But cannot this distinction be sufficiently indicated without making such a radical change in nomenclature as has been proposed by some? Professor Roy, in the previously mentioned lecture, says: "I will only remind you that although by chemical and other means a process apparently identical with what may be called the normal inflammatory reaction can be produced, yet that we must look upon these as cases where the inflammatory process has been called for by other than its legitimate cause; the cause, that is to say, to meet which it has been evolved in the animal kingdom, namely, a local invasion of pathogenic microbes."

To those of us who do not feel the necessity of making all our ideas

concerning all kinds of subjects conform to the so-called law of evolution, this statement of Professor Roy will not perhaps have as much importance attached to it as he thinks it deserves.

With the abundant clinical evidence furnished us by all classes of surgeons, and the evidence furnished by the army of bacteriologists throughout the world, it seems to be pretty conclusively proved that pathogenic microbes do set up and are the essential cause of the inflammatory process in many cases, and, viewed from the standpoint of the operating surgeon, probably they are the most important cause; still it would be rather a sweeping conclusion to draw that they are the only cause. Moreover, when we enquire how these microbes produce inflammation, we are told that at least part of their action is due to the irritating effect on the tissues of the chemical substances—ptomaines—to which they give origin; and if the term inflammation is properly applied to the process caused by these chemical substances, why not apply the same term to what is apparently the same process, set up by chemical substances derived from other sources?

The important distinction for us to notice between inflammation produced by pathogenic microbes and inflammation produced by other causes is that in the former case the cause is living and capable of multiplication, and in this way the process is apt to extend; while in the latter case the inflammatory process is limited by the amount, duration, or intensity of action of the irritant. It is claimed, moreover, that the products of inflammation caused by microbes will by inoculation reproduce a similar inflammation, while this is not the case as regards the products of inflammation produced by other causes. In many cases, no doubt, the two classes of causes act together.

With the introduction of the microscope, and the study of normal and pathological histology, the close resemblance of the changes which occur in the normal healing of a wound to those which occur in the inflammatory process gave rise to the belief that the old idea of inflammation being a complication of wounds to be feared and dreaded was at least partially incorrect, and that a certain amount of inflammation was necessary for the healing of wounds. Thus the edition of Ashurst's Surgery written thirteen years ago, says: "It is consonant with the modern views of the inflammatory process to look upon that process as being necessary for the repair of wounds under all circumstances." During the last few years, however, since a knowledge has been gained of the influence which pathogenic microbes play in preventing the primary healing of wounds, there has been a tendency to make a clear distinction between the regenerative processes which are necessary for the repair of wounds and inflammation. The position now held by the leading authorities is

that held by John Hunter one hundred years ago, when he said that "primary healing takes place without inflammation." Senn says, "All inflamed wounds, *i.e.*, those infected with pathogenic micro-organisms, suppurate, and the reparative process is delayed until the inflammation has subsided." Repair of a wound by granulation, even if the process should continue for a lengthened period on account of there being much tissue destroyed—so long as there is no suppuration—should be classed as healing by primary intention. This idea that inflammation is not present in the healing of wounds which are kept aseptic appears to be an important one. Besides the absence of suppuration and microbes in the healing of aseptic wounds, there is also an absence of clinical symptoms of inflammation. Thus Volkmann says that "a primary healing wound, several days after the operation, ought to look exactly as if it had just been stitched; no swelling and redness, no heat and no pain."

As has been stated in a previous part of this paper, the evidence, both clinical and bacteriological, in support of the germ theory of the inflammatory complications of wounds seems to be so overwhelming that it is now practically accepted by nearly all operating surgeons. In an address delivered before the last meeting of the British Medical Association, Dr. Hume said: "The antiseptic system admits of latitude in its application. It is open to every one to elaborate his own technique. But with whatever variety of method, there ought now to be no grades in the standard of work sought to be accomplished. No one now is ever heard to speak of laudable pus. No pus is praiseworthy; but, on the contrary, if it appear in a wound for which the surgeon is responsible, and in the making of which he had the control of all the conditions, it is always a thing to be ashamed of."

Probably the most aggressive opponent of the germ theory of inflammation is Lawson Tait. He says that he has, during his professional life, learned and unlearned some four or five theories of inflammation, and predicts that the present prevalent theory—a phase of lunacy; coccophobia, he calls it—will soon go the way of the other theories.

The principal arguments used against the germ theory of inflammation and the antiseptic precautions used in operating by those who hold the theory are:

(1) The germs being present everywhere, even in the healthy body—for Senn says that it is reasonable to assume that pathogenic microbes may and do exist in the healthy body without necessarily giving rise to disease—it is practically impossible to exclude them.

(2) If care is taken to prevent the accumulation of discharges, blood clots, etc.—in other words, to prevent the accumulation of pabulum on which they may flourish—the germs themselves are not liable to do harm.

(3) If the germ theory were true, the mortality of small operations, as compared with large operations, ought to be comparatively greater than it is; for, during the performance of a small operation in which antiseptic precautions are not adopted, one would suppose that as many, if not more, germs would be introduced into the wound as in larger operations done with antiseptic precautions. In connection with this point, Tait accuses the antiseptic surgeons of using a "heads I win, tails you lose" argument, claiming every success as a proof of the correctness of the germ theory, and attributing every failure to the neglect of some minute precaution of antiseptic detail, which minute precaution was probably neglected as frequently in the successful as in the unsuccessful cases.

(4) The rapid healing of wounds in the lower animals shows that, whatever the influence of germs may be, the vital condition of the patient and the condition of his surroundings, hygienically considered, are of more importance.

(5) Clinical results in some departments of surgery—for instance, abdominal—show that those who adopt elaborate antiseptic precautions do not obtain better results than those who content themselves with adopting ordinary cleanliness. Moreover, the use of antiseptics involves a great waste of time and patience on the part of the surgeon. They are apt to prove more poisonous to the patient than the microbes; and, too much faith being attached to the efficacy of these, operations are apt to be undertaken which should not be attempted; and, the mind being occupied with the minutiae of the use of antiseptics, the broader and more important principles of surgery, operative and otherwise, are apt to be overlooked.

The answers given to these arguments are that, although it may be impossible to exclude from the wound every microbe, whether from without or within the body, investigations show that the healthy body has the power to dispose, in some way, of a certain number of these, and that the quantity introduced at any one time into the wound has an important influence in determining whether or not they will produce any appreciably bad effect. Although the accumulation of blood clots in a wound is, as a rule, something to be avoided, yet, in cases where strict aseptic and antiseptic precautions are adopted, the clot does not decompose, as would be the case were antiseptics not used. The clinical results obtained by the same men in the treatment of such general surgical cases as compound fractures show that the success of treatment on antiseptic principles is greater than without.

Although we should naturally suppose that the larger the wound the more apt infection would be to occur, yet we know by experience that very minute wounds are frequently the starting point of such specific inflammations as erysipelas. In fact, some lay it down as a rule that all true cases

of erysipelas commence by infection through some wound of skin or mucous membrane, although it is sometimes impossible to see this wound.

It is a mistake to suppose that the adoption of antiseptic principles means the slighting of such principles as careful arrest of hemorrhage, drainage where necessary, and procedures to secure proper rest and position; while, with regard to the general condition of the patient, it is always the surgeon's duty to remember that he is not a mere sawbones, and that the only object of a surgical operation should be the promotion of the welfare of the individual on whom it is performed.

Are we to consider the inflammatory process to be always an evil? Regarding this, Dr. Hume says: "Not alone in primary adhesion, but in all forms of healing, it is seen that inflammation is never a help, and can only be a hindrance, and that if it occurs repair must take place in spite of it, or be delayed until it passes away." Professor Roy classes the process among the defensive mechanisms of the body. Senn says that inflammation is *per se* no disease, but an effort on the part of the organism and the tissue affected to eliminate or render harmless the primary cause. So that considering only the healing of the wound it is always an evil, but when a sufficient cause gives rise to it the process itself must be regarded as a conservative one, so far as the individual is concerned; as, if it did not occur, possibly in many cases the worse complication of septicemia might.

In concluding this paper, I shall not try to give a definition of inflammation; but shall, for the purpose of eliciting discussion, state a few propositions regarding it:

(1) It is a local process attended by structural, nutritional, and functional changes in the part affected.

(2) While these changes are locally injurious, and in the case of wounds hinder or prevent the normal healing process, yet they are probably an effort at defence on the part of the organism and the tissues affected.

(3) While the most frequent essential cause of inflammation is probably a local invasion of pathogenic microbes, yet other causes may produce apparently the same effect.

(4) Considering the desirability of not making any unnecessary changes in our terminology of disease, it does not appear that our knowledge is at present accurate enough to warrant us in limiting the term inflammation to the results of a local invasion of pathogenic microbes.

(5) The antiseptic precautions which it is now considered necessary to take, and which, at least, are not apt to do any harm, are within the means and capabilities of ordinary practitioners, and he who is anxious to do the best he can for his patients will not likely neglect them.

MITRAL STENOSIS.*

BY G. A. PETERS, F.R.C.S., ENG.,
TORONTO.

MRS. M., æt. 43. Had never been strong. Was anemic in girlhood, and never menstruated until a month before her marriage, when twenty-one years of age. She was not rheumatic, nor is there a history of rheumatism in the family. From the history she gave of her illness, it is probable that the valvular disease which ultimately caused her death commenced not less than twelve years ago. It did not, however, give her very much trouble until about two years ago, when she began to suffer from shortness of breath, with some precordial pain and distress. These symptoms increased in severity, and became very prominent for some weeks before her death, which occurred on the 9th December, 1892. During the past summer she suffered two or three very severe attacks of vomiting, lasting twenty-four or thirty-six hours. She was absent from home at the time, so that I did not see her in them; but I conjecture they were due to passive congestion of the stomach.

During the last month of her life the liver became very much enlarged, extending down nearly to the umbilicus; notably diminishing in size, however, when she was given complete rest in bed. The liver did not pulsate, but an impulse was clearly transmitted to it from the enlarged and distended right ventricle. There was slight edema of the feet and legs during the last three weeks. A very hard, dry cough was a distressing symptom for some weeks preceding death. Sometimes a very slight amount of mucus streaked with blood would be expectorated.

Her menstrual losses were generally excessive, though this might, in part, be accounted for by the presence of a small submucous fibroid.

During life there was not much to be learned by inspection of the chest. There was no undue bulging of the sternum or costal cartilages. Palpation over the base elicited a thrill of rather a soft character.

Percussion showed moderate enlargement towards the right side.

A presystolic murmur could be heard very distinctly over the base and apex, but could not be traced to the left of the apex.

For about ten days before death the temperature went up to about 100° to 101° Fah., and the skin became yellowish in color, though not distinctly jaundiced.

Post mortem. There was a small amount of fluid in the pericardium. Pleuritic adhesions were present on the right side over the superior and middle lobes, evidently the remains of a pneumonia, during which she was attended by Dr. Graham. The right auricle and ventricle were

greatly distended with blood; and there was some blood in the left auricle, but the left ventricle was quite empty.

On opening the heart, it is found that the right heart and the aortic valves are healthy, but that there is almost complete obstruction of the left auriculo-ventricular opening. The mitral valve is very much thickened and contracted, leaving an opening not more than one-eighth inch in diameter. On the edge of this opening, moreover, is a nodular-looking mass of apparently recent granulations. In addition to the normal opening, there are two smaller openings in the valve, evidently due to rupture from the auricle into the ventricle. The cordæ tendinæ are involved in the contraction to such an extent that the muscoli papillares are drawn up to the margin of the valve.

The right side of the heart is dilated and hypertrophied, and the left auricle is perhaps twice its normal thickness, but not dilated to any considerable extent.

RUPTURE OF HEART.*

By DR. J. L. G. MCCARTHY,
BARRIE.

THE patient, S.C., æt. 68, farmer, florid complexion, somewhat stout build, and not looking more than his years, died suddenly in Dr. —'s office while consulting the doctor, and before any examination was made, or even a history of his symptoms given.

Previous history. About sixteen years ago, I was consulted by this man for a troublesome pain between his shoulders. I took no notes of the case, but from the prescription given it was evidently then diagnosed as one in which the heart was involved—probably a valvular lesion.

The following year I attended him for erysipelas in the face. Since then he has not had occasion to consult a physician, except on two occasions for granular lids, although throughout this time the pain between the shoulders has persisted more or less.

During this period he has worked steadily at farm work, up till about a fortnight previous to his death; when, during hay harvest, striving to work alongside and do as much as younger men, he overworked himself, and had to give up, complaining that he felt unwell, his chief trouble being the pain between his shoulders and at his breast.

* Presented to the Pathological Society of Toronto.

The day of his death he came to town to attend the funeral of a grandchild, whose death fretted him, and also to consult a physician. He was driven to the doctor's office, and had to mount a rather steep stairway. He had hardly sat down on a chair, and the doctor had spoken but a few words to him, when a slight muscular tremor passed over him. He slipped from the chair; his breath came and went once or twice; the face flushed and paled, and flushed again, and he was dead.

Efforts were made to revive him by artificial respiration, which, under the circumstances, probably hurried the end. The first impression was that the death was cerebral, but the sudden and complete collapse pointed more probably to the heart.

A *post mortem* was obtained by means of a coroner's inquest.

The examination showed a somewhat congested brain, the congestion being general, and apparently recent. In other respects this organ was healthy.

Upon opening the thorax, the pericardial sac was found adherent in front to the sternum and the third, fourth, and fifth cartilages; so much so that the dissector, in raising the ribs, cut into the pericardial sac, revealing an enlarged sac filled with clot and bloody serum.

The cause of this was soon found to be a ragged rupture an inch and a half long on the left border of the heart, about one inch below the auriculo-ventricular groove.

The lungs were congested, and had more than the usual amount of pleural adhesion, but were otherwise healthy.

The abdominal organs showed no signs of disease. The stomach had digested a fairly hearty dinner eaten about three hours before. The liver, spleen, kidneys, and bladder were healthy. There had been no dropsy. The heart was not much, if any, over the average size.

There was no apparent disease of the right side, except that the walls of the ventricle were somewhat thinned; but on the left the auricle is enlarged in capacity, and the ventricle has its walls greatly hypertrophied. The mitral valve gives no evidence of alteration or disease; but the valves of the aorta are hardened, thickened, calcareous, and inelastic. This calcareous condition extends up into the aorta, lying superficially on or partially embedded in its inner coat, on the right side of the vessel about an inch in width, until it reaches the arch; it then surrounds the orifices of the innominate and carotid arteries, and extends about an inch beyond. It is more of the nature of a deposit upon the inner coat than of an infiltration or degeneration of tissue.

The rupture, viewed from the interior of the ventricle, consists of two openings upon the left side of the cavity obscured by the columnæ carneæ, and placed about one inch below the auriculo-ventricular orifice.

The one opening will scarcely admit the tip of the little finger ; the second much smaller, about the size of a buckshot. These openings, passing through more than an inch thickness of wall, expand into an uneven, ragged tear, which, on the outside, shows more than an inch and a half in length.

The reasons why I have offered to present this case, and why I deem it worthy of some little consideration of a society of the character of the Toronto Pathological Society, are that it seems to be a very well-marked instance of its kind. It is a striking example of how life is prolonged, and the hard labor and work of a farmer done with comparative comfort and little complaint, with a vital organ so disabled as the one described ; of how nature compensates by a hypertrophied wall for the injury disease has inflicted by means of an imperfect valve.

It is also remarkable for the apparent small compensation required to overcome a valve so seriously disabled ; that is to say, that the compensatory changes do not appear to have extended to any other part or organ beyond the ventricular wall.

Again, it is peculiar in the nature of the rupture. Commencing with the small openings described, it expands into an enlarged ragged tear ; the explanation of which, I take it, is that the openings on the inner wall were the commencement of what would have been an aneurism of a dissecting nature, but they were hurried to their final rupture by overstrain. It is, I believe, remarkable for the rupture through so thick a wall of comparatively healthy tissue.

It is a case that leads one to doubt Dr. Bouilland's statement that all diseases of the heart have an origin in the peculiar diathesis of the patient.

Finally, it is a warning to us not to be too hurried in expressing an opinion of the cause of sudden deaths. It is true that in this case we had come to the conclusion, prior to the *post mortem*, that this was a case covered by that convenient phrase, "Heart Failure." However, no one suspected, previous to the *post mortem*, that this would prove to be a ruptured heart.

TWO CASES OF LAPAROTOMY FOR UNUSUAL CONDITIONS.*

By T. K. HOLMES, M.D.,
CHATHAM.

THE object of this paper is to present the history of two cases, one of which is of so rare occurrence as to be almost unique, and the other very interesting to me on account of its history and termination.

CASE I. On April 2nd, 1893, I was asked by Dr. Fraser, of Thames-

*Read at the meeting of the Canadian Medical Association, September, 1893.

ville, to see Mrs. B., who gave the following history: She belonged to a healthy family, and is a robust-looking woman herself, of German parentage, and twenty-nine years old. She had been married about twelve years, had five living children and one miscarriage, and had always lived on a farm and worked hard. The miscarriage occurred in December, 1892, and she suffered from hemorrhage and septicemia before the dead fetus was discharged. After the miscarriage she had occasional chills and fever, with pain in the left iliac region, but her temperature had never been high, and had been normal most of the time until I saw her. Dr. Fraser had visited her several times during the winter, and had, about ten days previous to my visit, discovered a swelling in the left side of the pelvis. Bimanual palpation revealed a globular swelling as large as an orange about two inches to the left of the uterus, and, although it was quite tense, fluctuation was made out. It was slightly movable, very tender, and rendered walking difficult. Her pulse and temperature were normal, the uterus retroverted, and the cervix lacerated bilaterally. She was removed to the hospital in Chatham, and after the usual preparation the abdomen was opened in the median line and the tumor aspirated. All adhesions were then separated, the Fallopian tube tied close to the uterus, and the mass removed. It proved to be the ovary, and contained three ounces of pus. The peritoneal cavity was flushed with sterilized normal salt solution until all hemorrhage stopped, and the wound was closed with silkworm gut, and dressed with sterilized gauze. No drainage tube was used, and the dressing was not changed till the seventh day, when the sutures were removed and union was complete. It will be seen by examining the specimen which is here presented that the tube is not diseased, and this constitutes the interesting feature of the case. Dr. Joseph Price, of Philadelphia, says abscess of the ovary never occurs without disease of the tube; and Dr. Cullingworth, in his recent address before the British Medical Association, says: "Of primary ovaritis, either acute or chronic, which is supposed by some authorities to be a common affection, and a frequent cause of pelvic peritonitis, I have scarcely (apart from tuberculous disease) met with a single example."

CASE 2 is of interest because it is typical of a class of cases the treatment of which is not settled. On May 3rd, 1892, I saw, in consultation with Drs. Dewar and McKenzie, of Essex Centre, Mrs. W., who had been ill about ten days. The attack began with pain in the abdomen, rather more severe in the right iliac region, where the attending physicians thought there was some hardness, but tympanites developed so rapidly that this could not be determined with certainty. There were chills and fever, complete inactivity of the bowels, vomiting, and great prostration. When I saw her the abdomen was distended and tympanitic to an extreme degree, respiration was thor-

acid and difficult, the temperature was 103° ; and the pulse 130. No tumor could be made out by external palpation, but the tympanites was so great that it might easily have been unrecognized. Examination per vaginum and per rectum gave negative results. The case was so urgent that an exploratory incision was determined upon, and was made over McBurney's point. The intestines were much congested, soft adhesions existed among the viscera presented, but no disease of the appendix was present, nor was there diffused pus, as is seen in septic peritonitis. No obstruction existed in the alimentary canal, but peristalsis was completely abolished. Thinking the patient's grave condition due to the paresis, distension, and to consequent fecal poisoning, I closed the wound from above to within an inch of the lower angle, and into the opening thus left sutured a part of the distended gut. It was decided that in case the bowels should not move in a few hours, and if the alarming prostration should continue, the part of the exposed intestine should be opened. The pulse grew weaker during the afternoon, and at dark, or about ten hours after the operation, could not be felt at the wrist; the surface of the body became cold and clammy, sight and power of speech failed completely, and death seemed imminent. Dr. Dewar now incised the gut. Much gas escaped, but no fecal matter until two hours after, when a copious evacuation from the fistula took place, and this was repeated several times through the night. Stimulants which could not be retained before were given freely, and retained through the night, and in the morning her condition was slightly improved—the pulse could be felt, sight and speech had returned, and the swelling had largely subsided. From this time improvement was gradual, and soon all signs of immediate danger had passed. The fistula, however, remained open, and was a source of great annoyance and inconvenience. I made two unsuccessful attempts to close it, the first by freshening the edges and uniting them by a double row of sutures. The sutures were removed on the seventh day, and for a few days success seemed achieved, but a small opening appeared in the line of union, and this soon enlarged and became as bad as before. The second attempt, by a flap-splitting operation, failed apparently through the persistent vomiting, by which such tension was made as to defeat union. Resection of the bowel seemed the most likely means to succeed, but the patient became discouraged at the previous failures and went to Harper's Hospital in Detroit, where resection was performed by Dr. Walker, and the ends united by Murphy's button. She made a slow recovery, and, I believe, remains well. This woman would undoubtedly have died had the gut not been opened and the distension relieved, and there is abundant authority to show that many patients die from intestinal paralysis and distension. I feel sure the opening of the bowel in this case saved the patient's life, and I have detailed the history

of the case in the hope that the success attending it may induce others in suitable cases to adopt it. In the *American Journal of Obstetrics* for August of this year, Dr. Henrotin reports the successful treatment of such cases by opening and draining the bowel. He says the plan is especially applicable to cases of obstruction in which the bowel remains distended from paralysis after the obstruction is relieved. Mr. James Greig Smith, of Bristol, in a paper read before the Royal Medical and Chirurgical Society last year, speaks most favorably of relieving distension in this way, and he says that many patients after relief of obstruction, as in strangulated hernia, die from over-distension and paralysis. In the discussion of the paper Mr. Bryant, Mr. Marsh, Mr. Godlee, Mr. Thornton, and others, fully concurred in the views set forth in the paper.

Clinical Notes.

CHOLECYSTOTOMY—RECOVERY

BY DR. J. W. F. ROSS,

Toronto General Hospital.

MRS. H., æt. 28; married seven years; two children. Father died with bronchitis and asthma at the age of fifty; and mother of bronchitis, at forty-five, probably phthisis. The patient, a little, healthy-looking woman, presented herself at my office on October 13th, 1893, stating that she had noticed a lump in her abdomen three days before. For about a year she had had a pricking sensation in her right side; this pricking sensation had lately developed into an ache. She felt at times as if she were suffering from indigestion. She noticed that the lump was more prominent when standing than when lying down. Her skin had a somewhat sallowish appearance, although there was no tinting of the sclerotic; the tinting might readily be accounted for by the fact that she was a brunette. She had never had any attacks of colic, and had never been jaundiced; she had never had any severe illness.

On examination I found a hard tumor, smooth in outline, about the size of a sausage, swinging like a pendulum between the crest of the ilium on the right side and the ensiform cartilage, described the arc of a circle of which the centre would be about three inches below the right nipple, and the radius about five inches. The tumor was so hard to the touch that I thought

it might be due to some fecal impaction; therefore, advised a dose of castor oil, copious enema, and a return to me the next day after the bowels had been thoroughly moved. The tumor was found, on the second visit, in the same place, with the same area of movement, and the same line of attachment. I then pronounced it a case of distended gall bladder from impaction of a stone in the cystic duct, and advised immediate operation.

On the 17th, or four days after the first interview with the patient, I opened the abdomen about an inch and a half from the edge of the ribs on the right side. The tumor was found to be a distended and very much thickened gall bladder; it felt very hard, and no distinct fluctuation could be made out, owing to the thickness of the walls. It was punctured with a trocar, incised, and three gallstones removed. On examination of the cystic duct a stone was found impacted. By enlarging the incision towards the ensiform cartilage, I was enabled to pass the index finger of the right hand under the liver and under the cystic duct, and the index finger of the left hand along its outer margin, and, with the two fingers thus placed outside the duct, slipped the stone down without difficulty into the gall bladder. It was about the size of a small marble; the stones, four in number, were all of this size and faceted. The gall bladder was long and narrow, and was fastened to the lower angle of the wound by a continuous suture of fine silk, and a drainage tube inserted. The wound was then closed with silkworm gut sutures; gall bladder was washed out; the fluid was black and tarry-looking, showing that the obstruction had been but recent, and that the bile pigment had not yet been removed. In two or three days bile discharged freely through the fistulous opening. The discharge of bile seemed greatest from 3 a.m. until breakfast time, and was considerably increased after the administration of calomel. Whether this was a coincidence or not cannot readily be determined. The bile continued to discharge in this way during the early hours of the morning, and at a period when the stomach had had the longest rest from the introduction of food, for some two or three weeks. Through the daytime, and even after the patient was able to be up, very little bile discharged, but there was always a copious flow in the early morning, so much so that the pads would be thoroughly saturated. I attributed this to the fact that the gall bladder was probably at this period of time performing its natural function as a reservoir, and that during the hours of sleep it was storing up the bile manufactured by the liver, but not required till the next ingestion of food. I am satisfied that bile is an excellent germicide or ante-putrefactive agent, as the wounds made in the performance of this operation show very little sign of septic irritation. The patient made an excellent recovery; the sinus is now healed, and she is doing her ordinary work.

MALIGNANT DISEASE OF THE MESENTERY.

By JAMES F. W. ROSS, M.D.,
Toronto General Hospital.

Mrs. W., æt. 55. Patient had had several children; been married for several years; had always enjoyed good health until the last few months. She began to fail in health, and discovered a lump in the left loin, two or three inches from the edge of the floating ribs. She then consulted her family physician, and he advised her to come to Toronto.

On examination, I found the abdomen occupied on the left side by an irregularly outlined mass, movable to a limited extent, with a semi-fluctuating feeling. The colon was found to be inside the growth; the loin on percussion was dull. The patient's appearance gave one the idea that she was suffering from some malignant disease. The temperature was found elevated and fluctuating between 99° and 101° ; the elevations were irregular, and did not correspond to the elevations produced by retained pus. The elevation was that so frequently seen in cases of malignant disease. As the patient also suffered from a large umbilical hernia, I determined to do the radical operation on the hernia, and at the same time have a peep at the tumor, although I did not think for a moment that it could possibly be removed. As the loin was dull, and the colon was found inside the growth running, in fact, over its inner edge, and as albumen and casts were found in the urine, I supposed that the disease was probably malignant disease of the left kidney. The irregularity of its outline was, however, somewhat puzzling. On opening the skin the hernial sac was encountered, and found to contain a large portion of the omentum; this was so firmly united to the sac wall and had burrowed so deeply between the fibrous trabeculæ that it was necessary to tear it off by main force. After having done so, the omentum was so much torn that it was necessary to remove the larger portion of it. The abdominal wall was then split up both above and below the aperture through which the hernia had escaped; this aperture was large enough to admit a man's thumb. The tumor was then explored, and was supposed to be connected with the left kidney. It was evidently malignant in its nature, and a very soft form of growth. On attempting to examine it further, a portion of the bowel that was adherent to it tore into the slender capsule, and on endeavoring to check the hemorrhage thus caused, with forceps, the tumor itself was found to be so friable that the forceps would not hold. I, therefore, determined to do nothing further, but to content myself by completing the operation for the radical cure of the hernia. Sponge pressure was employed

to check the bleeding while the stitches were being inserted into the abdominal wall. The wound was then carefully closed through its entire extent of nearly six inches. Iodoform gauze dressing was applied. Silkworm gut sutures were used; silk was used to tie off the omentum.

The patient made an excellent recovery from the operation; the wound healed kindly, and remained firm throughout its entire extent. The patient remained in the hospital until her death on the 16th of October. The operation was performed on the 31st of August; she thus lived for about seven weeks. In the interval the tumor grew rapidly.

Post-mortem examination report furnished me by my house surgeon, Dr. J. B. Peters:

External examination: nothing abnormal except the abdomen, which was increased in size. Palpation showed the presence of a tumor in the left lumbar region, extending forward into the umbilical region almost to the median line. The tumor felt hard, not nodular, and was not notched. On opening the abdominal cavity the remains of the omentum were found adherent along the line of incision in the umbilical region. No hernial opening was present at the umbilicus; the intestines were matted together on the left side by a large mass of apparently cancerous growth, which filled up the mesentery, and was adherent to the descending colon. The mesenteric glands were enlarged, and showed a secondary new growth, which was partially degenerated. Left kidney showed chronic interstitial nephritis; right kidney was somewhat fatty, and contained a small quantity of pus in the calyces. Spleen, normal; liver soft, friable, and very fatty; no new growth apparent; uterus, small. Right ovary slightly fixed by peritoneal adhesions; left ovary, normal; heart and lungs, normal.

The tumor was thus found to be mesenteric, and not renal. The presence of chronic nephritis would account for the albumen and casts found in the urine.

Progress of Medicine.

MEDICINE

IN CHARGE OF

W. P. CAVEN, M.B. Tor.

Lecturer in Clinical Medicine in the University of Toronto: Physician to
Home for Incurables.

CREASOTE IN TUBERCULOSIS PULMONUM.

Dr. J. T. Whittaker has carefully reviewed the literature of this remedy. He concludes: (1) Creasote, when pure, is harmless. (2) It has no direct action upon the tubercle bacillus. (3) Tuberculosis pulmonum is chiefly a secondary infection by a streptococcus. (4) Creasote has no direct action upon this streptococcus; hence none whatever upon hectic fever. (5) It destroys lower organisms, especially those which produce fermentation, without affecting the process of digestion. (6) The beneficial action of creasote, which is undeniable in most cases, is chiefly, but not wholly, upon nutrition.—*Therapeutic Gazette*, 1893, No. 7, p. 438.

REFLEX HEMIANASARCA.

Rendu (*La Semaine Médicale*, 1893, No. 41, p. 321) has reported the case of a man who was seized with pain in the left side and posteriorly—at first dull, but subsequently sharp. He continued at his work, complaining, however, of headache, pain in the back, indigestion, anorexia, constipation, and a little cough; at night there was a little fever. At the end of three weeks the man presented a prominence at the base of the left half of the chest, with *dullness on percussion; below, the left clavicle the percussion note was tympanitic. Vocal fremitus was diminished; the heart was not displaced. At the angle of the scapula, blowing breathing, and bronchophony were to be heard, but no egophony and no pectoriloquy. In the area of dullness the breath sounds were feeble; râles could not be heard. Upon the right side some fine râles were heard at the base, with some impairment of the percussion resonance. In the precordium pleuro-pericardial friction sounds could be heard. The heart was normal, and the urine contained no albumin. By exclusion, a diagnosis of spleno-pneumonia of influenzal origin was made. Remittent fever, with vesperal exacerbations, persisted, notwithstanding the administration of quinine sulphate and the application of a blister to the chest. The pleural friction sounds

disappeared, but the pulmonary signs and the dyspnea persisted. The temperature remained slightly elevated. The bronchial breathing extended from the scapula to the base of the lung. Applications of wet cloths to the chest afforded relief, but interfered with perspiration. Finally, there suddenly developed, without appreciable cause, an edema of the chest wall at the level of which the blowing breathing was heard, extending thence to the lumbar region and to the left thigh. At the same time local fremitus disappeared, the vesicular murmur became enfeebled, and egophony was heard in a circumscribed area. Explanatory puncture disclosed the existence of a serous effusion of small volume. The edema extended, progressively involving the trunk, the scrotum, the buttocks, the thighs, and the legs, predominating, however, upon the left side. Heart and urine still presented no abnormality. Fever persisting, the dyspnea and the general condition becoming more distressing, and the fluid continuing to accumulate, a portion of the effusion was evacuated by puncture. Dry cups, scarification, digitalis, purgation, and a milk diet were followed by no improvement. The fever, however, ultimately subsided, leaving anorexia, emaciation, cachexia, and anasarca, while the signs of pleural effusion became more and more pronounced, until the vocal fremitus had entirely disappeared, and the breath sounds could no longer be heard. Râles were heard at the base of the lung, but the heart was not displaced. The removal of some six ounces of fluid was followed by considerable relief. Thereafter the morbid phenomena gradually receded, the flow of urine became progressively augmented, and the edema gradually disappeared. Sleep and appetite returned, and recovery ensued. The duration of the illness was about eleven weeks. The edema is explained upon the basis of a reflex paralysis of the vasomotor nerves of the affected regions secondary to the pulmonary condition.—*American Journal of the Medical Sciences.*

BROMOFORM IN WHOOPING COUGH.

Dr. F. W. Burton-Fanning says that Stepp reported, in 1889, one hundred cases of whooping cough treated with bromoform without a single failure, and his results were indorsed by other physicians. Dr. Burton-Fanning also reports thirty cases of his own treated with this drug. Bromoform is a colorless, oily liquid with an ethereal odor and sweet taste, insoluble in water. He suspends the bromoform in a mixture, as follows :

Bromoform.....	m j.
Pulv. tragacanth co.....	ʒ ss.
Syr. simp.....	ʒ ss.
Aq.....	ad ʒ ss.

For children under one year he gives half a minim, up to three years one minim, up to six years two minims, three times a day, to begin with ; then, if necessary, these doses may, with safety, be gradually increased until they are doubled. It is important to have a fresh supply once a week, to keep the bottle in the dark, and shake it before taking the contents. Bromoform should never be used when it is of a brown color, as this is due to its decomposition and the liberation of free bromide. He considers bromoform of specific power against the paroxysmal cough, on which the chief dangers of whooping cough depend. The number of paroxysms with this treatment are much fewer, shorter, and less violent, and the vomiting always ceases, but the duration of the disease is not materially shortened. If the bromoform be discontinued within four weeks, the characteristic cough and attendant miseries return at once. He also finds that this remedy is so specific in its action as to be of great use in diagnosis. In doubtful cases its success or failure to relieve the cough led him to a correct conclusion as to the nature of the disease, as subsequently established by other considerations.—*Boston Medical and Surgical Journal*.

CHLORATE OF SODA IN CANCER OF THE STOMACH.

At a meeting of the French Association for the Advancement of Science in August last, Dr. Brissaud, of Paris, made a report upon the above subject. He said that it was an established fact that solutions of chlorate of potash exert a very favorable influence on epithelioma of the mouth, and certain forms of cancrioid of the face. The successful results obtained with this method induced him to try the effect of the corresponding salt of sodium in the treatment of carcinoma of the stomach. This salt was selected because it is much less toxic, and more soluble than chlorate of potash, seeing that relatively large doses may be injected into animals without ill effect, and that it is soluble in three times its own weight of water, while the potassium salt requires twenty parts of water for complete solution. He had treated several undoubted cases of cancer of the stomach by the administration of chlorate of sodium in doses varying from eight to sixteen grammes (two to four drachms) in the twenty-four hours. The results were so satisfactory that if his observations were limited to one or two cases only he would hesitate to publish them, because he might possibly have mistaken cases of chronic gastritis for cancer ; for the former, as is well known, sometimes present all the symptoms of malignant disease. But during the last four years he had tried this treatment with equal success in five successive cases of localized gastric cancer, and it is difficult to admit that an error of diagnosis was committed in each of these five cases ; this is the more improbable seeing that three of the

patients presented a distinct epigastric tumor. In every case the treatment was followed by the most remarkable improvement, amounting practically to a cure. The drug was given in doses of twelve, fourteen, or even sixteen grammes in the twenty-four hours, and the patients may now be regarded as radically cured. Under the influence of this treatment, the melenæ, hæmatemesis, and cachexia disappeared; the appetite returned; and in the three cases in which a tumor could be detected in the epigastrium, it gradually subsided until no trace of it was left at the end of six weeks. On the other hand, the treatment failed in a number of cases; for while chlorate of sodium seems to exert a favorable influence on malignant tumors of the epithelial type, it produces no effect whatever on the interstitial sarcomatous type of neoplasms. Moreover, the failure in some of these cases is to be attributed either to the fact that cancer had already spread to other organs, or to the presence of complications which were not amenable to the treatment. For example, in one case the liver was already involved when the administration of chlorate of soda was commenced. In another patient, a young woman who had at first experienced some relief from the treatment, the disease suddenly extended to other parts of the body, where it developed with extreme rapidity. She was a patient of Dr. Nélaton; she received sixteen grammes of chlorate of soda a day, and in the course of a few weeks hæmatemesis ceased, appetite returned, and she put on sixteen pounds in weight. This improvement was so remarkable as to suggest an error of diagnosis. At the autopsy, however, cancerous nodules were found in various organs and tissues. In a third case death was due to phlebitis of the inferior vena cava. It cannot, therefore, be included in the statistics of the treatment of gastric cancer by chlorate of soda.—*New York Medical Record*.

A NEW PHYSICAL SIGN FOR THE EARLY DIAGNOSIS OF CROUPOUS PNEUMONIA.

Dr. F. H. Morrison, writing in *The Lancet*, refers to the difficulty of the early diagnosis of pneumonia in children, and quotes Dr. Francis Moinet, in "Keating's Cyclopedia of Diseases of Children," who says: "In not a few cases no satisfactory results are obtained by auscultation and percussion until a comparatively late period, owing to the limited extent of the affected region, and its position in the centre of a lobe surrounded by healthy lung tissue." In several cases recently seen, where the general symptoms of pneumonia were present, but none of the ordinary physical signs, Dr. Morrison adds: "I have discovered what I am venturing to describe as a new physical sign. On careful auscultation of the chest I have heard jerky expiration over a limited area, and on noting

the position of this area have found developed in it subsequently the usual signs of pneumonia. This jerky expiration is the first physical sign developed, and can be heard soon, if not immediately after, the rigor, before dullness or crepitations appear. It is much more distinct in children, but I have also heard it in adults."—*New York Medical Record*.

THE TREATMENT OF PERICARDITIS. LEES (D.B.).

Etiology. Majority of cases are of rheumatic origin, which may be shown by obvious or only very slight joint symptoms, or by chorea. Others are associated with a dry pleurisy, which may be double, and may be accompanied by pneumonia; and these again are probably rheumatic, and are often of a very fatal type. The author has only seen the periton-eum affected once in this latter group of cases. Chronic Bright's disease is a less common cause than is usually stated (only about 7 per cent.—Sir Wm. Roberts), tubercle occasionally, and malignant growths rarely.

In twenty-eight cases of the author's, last year, sixteen were rheumatic (57 per cent.), eight accompanied pneumonia or pleurisy, and one each occurred with granular kidney, with tubercle, with sarcoma, and with aortic aneurism. The percentage of the rheumatic cases would be much higher if cases of adherent pericardium and other consequences of pericarditis were included.

Symptoms and signs. The author notes the cases in which a friction sound is never heard in the whole course of the disease, and those in which early on it simulates a new double aortic murmur; and he emphasizes the importance of correct diagnosis in the latter case, both because of the greater gravity of pericarditis, and the fact that it is more open to treatment.

Dilatation can often be made out early in the disease, especially on the right side (because the right ventricle is thinner and therefore sooner affected than the left). This is accompanied by dyspnea, coming on before cyanosis exists, and due, according to Lees, to "a physiological reflex, by which the distension of the right ventricle causes stimulation of the respiratory centre, thus bringing about its own relief," just as the distension of the left ventricle acts on the vaso-motor centre and opens up the visceral vessels. Dilatation of the left ventricle soon comes on, the pulse becoming weak and often irregular.

He lays especial stress on the great gravity of the affection, which, he thinks, is often not sufficiently appreciated; his experience being that, though most cases of rheumatic pericarditis recover, the recovery is imperfect, and the patients are left cardiac cripples.

Treatment. The chief is the ice-bag applied to the precordium, the

effect being watched. It is injurious, however, in the subacute recurrent cases in rheumatic children, but applicable to acute cases. Salicylates not to be discontinued, the depressing effects reported having been due, probably, to impurities of the drug. Morphia subcutaneously; leaches to the precordium in early stage. In one case, venesection was of use where there was great engorgement of the right side of the heart.—*Lancet*, July 22, 1893.

ON SOME POINTS IN THE TREATMENT OF EPILEPSY. (ALEXANDER, WM.).

The author passes over the gynecological and surgical aspects of the disease, merely remarking that whenever there is a history of head injury with the existence of any irregularity of the cranium said to have resulted from it trephining should be performed; as the operation, without opening of the dura mater, entails but little risk.

In most cases, however, general and medical treatment are alone applicable. "In the first place, the mind of the patient must be placed in such a state of repose and content that relief is likely to occur." It must, therefore, be explained to the friends and to the patient himself (if old enough) that immediate relief from the fits is not likely to occur, and arrangements must be made so that his healthy intervals may not be unhappy. Where the friends are in a constant state of excitement, and even more so when they are indifferent and regard the patient only as a nuisance, he should, if possible, be removed from home. The medical adviser must become the friend of the patient, gaining his confidence, teaching him to realize his position, and to understand the necessity for restraint.

As far as possible the patient should live like other people, avoiding undue excitement. Children should be educated mentally, morally, and physically, and generally require private tuition; they should be allowed to play games, even when there is some slight risk in so doing. The risk is not so great, as the fits do not generally come on when the patient's faculties are on the alert, but when he is half asleep, at rest, or after excitement; and the dangers of checking him at every point are mental enfeeblement and imbecility. "The most dangerous position for an epileptic is to be alone, no matter where he is," and his companion should not be a mere attendant or keeper.

In the case of adults it is very important to find them interesting employment, preferably out of doors. With poor patients this may now be done by placing them in homes in which labor is carried on in special workshops, and under protection, examples of such homes being that at Magbull, Lady Meath's "Home of Comfort," at Godalming, and the

"National Association for the Employment of Epileptics," near London. They are, however, quite inadequate to meet the requirements of all.

The food of epileptics is to be simple and unstimulating. The hours of sleep are to be ample but not excessive, as is the tendency in these patients. Tobacco is to be avoided.

As regards drugs, bromides have been looked on as the mainstay. The author, however, thinks that in large doses they decrease the number of fits only at the expense of the mind and of the general health, and often do not even decrease the fits.

At the "Home," at Maghull, a combination of borax (20 grains) with sodium bromide (5 grains), three or, in a few cases, four times a day, has proved most useful both in decreasing the number of fits, and, even more, in improving the mental condition of the patients, who became brighter and more cheerful, even when almost imbecile. Borax alone did not give such results. An examination of the tabulated record of cases shows that in nine the fits were arrested for periods of several months; in seventeen diminished in frequency, often very greatly; in one there was no effect; and in one the number increased.

There are three drawbacks to this treatment: (1) It is apt to cause gastric disturbances. The medicine must, therefore, be taken after food, the dose being small at first and gradually increased. If necessary, stop or decrease the supply for a few days. (2) Erythema, going on to eczema, may be caused with intolerable itching. This generally passes off if the drug is persevered with. Alkaline baths relieve the itching in the meanwhile. (3) Alopecia, complete or in patches, occurs in a few cases. Generally, the hair appears again, even if the drug is continued; but if not, stopping the drug generally suffices.—*Liverpool Medico-Chirurgical Journal*, 1893.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

CHLORIDE OF ETHYL.

Dr. Edgar Gans, of Carlsbad, refers to the experiments by Debove with methyl chloride as an anesthetic, which acted by refrigeration of the part. Ethyl chloride, however, has proved more effective. It is a color-

less fluid, with a pleasant ethereal odor, and boils at 50°F. It is prepared by treatment of alcohol with hydrochloric acid: $C_2H_5OH + HCl = C_2H_5Cl + H_2O$. The hydroxyl of alcohol is, therefore, replaced by chlorine.

Chloride of ethyl is obtained for use in small closed glass tubes, one end of which is drawn out into a fine capillary tube. To anesthetize a given surface, the extremity of the capillary tube is broken off, and as the ethyl chloride boils at 50°F. the heat of the hand is sufficient to force the fluid in a fine spray upon the desired part. The tubes contain about $2\frac{1}{2}$ drachms, which usually is sufficient.

The effect of the spray is first to redden the skin, and then in about a minute to render it completely white. Then a coating of ice is formed in the shape of fine snow. Usually, the tube is best held at a distance of about one foot (thirty centimetres) from the spot to be affected.

The remedy is free from disagreeable odor, and no threatening symptoms occurred in Gans' cases. A few nervous individuals experience a peculiar drawing in the extremities and a feeling of confusion, lasting a few seconds.

Gans experimented upon dogs in Professor Liebreich's laboratory, and proved that the remedy, under repeated use, does not produce thickening of the skin, scaling, or gangrene. In one dog, after the use of two tubes, a thermometer showed that the subcutaneous temperature was reduced to 15° to 18°C. (59° to 65°F.).

Gans refers briefly to a number of his cases in which the results obtained were remarkable. One was a case of supra-orbital neuralgia, which had persisted for six weeks with the most violent pain. One application of the ethyl chloride cured it. In another there was neuralgia of the left mammary gland, which had resisted treatment for five months. The first application caused the pain to disappear completely, but it returned next day, whereupon the application of ethyl chloride was repeated daily for two weeks; the patient has been free from pain for ten months.

In a third case, one of lumbago, in a man sixty years old, who was unable to stand erect, one application appears to have worked a cure.

In three cases of beginning gouty attacks the ethyl chloride appeared to cut short the attack.

In several cases of migraine the pain ceased immediately after the employment of the ethyl chloride.

In a case of pruritus of the scrotum, in a diabetic forty years old, whose single subjective complaint for five years had been the persistent itching of the scrotum, a single use of ethyl chloride produced freedom from itching, lasting five weeks.—*Therapeutic Gazette*.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

RELATION OF THE VAGINAL SECRETIONS TO PUERPERAL FEVER.

Doderlein (*Zeitschr. f. Geburts-Nulfe*) examined the secretions in one hundred and ninety-five cases of pregnant women with reference to the presence of pathogenic organisms. In normal secretions only fission fungi were found, while bacilli and cocci occurred in great number and variety in those of disease. The percentage of healthy cases was 55.4 per cent.; of pathological, 44.6 per cent. In primiparæ the proportion of normal cases was a little larger, amounting to about 64 per cent. The author suggests the litmus reaction as a ready means of distinguishing healthy from morbid conditions of the vaginal secretions. Normally, the reaction of the vaginal mucus is strongly acid, while in disease it is faintly acid, neutral, or alkaline. Experiments show that the acid condition of the vaginal secretions is produced by the innocuous organisms which have their habitat in the healthy vagina. The author found by culture experiments that these organisms, when present in great abundance, were inimical to the growth of the staphylococcus. A similar observation has been made by Bumm.

The author's conclusions for the practical obstetrician are to the effect that, in women whose vaginal secretions present the normal litmus reaction, a feverless childbed is assured, provided they escape infection from without.

In morbid conditions of the vaginal secretions, pathogenic organisms are liable to be transported into the uterus on the examining finger. Without internal manipulations of any kind during labor, the danger of infection is almost *nil*.

In private practice it is generally impracticable to distinguish between healthy and morbid vaginal secretions. The prophylaxis for every case must be such as to protect against all possible sources of infection.

In hospital clinics, the litmus reaction serves to separate the diseased from the normal cases.

Antiseptic irrigations of the vagina for disinfection is not reliable. The irrigating fluid does not penetrate all the folds and recesses of the passages. Steffek and Doderlein have practised irrigation combined with thorough friction with the fingers, and lubrication is re-supplied by rubbing the vaginal surfaces with mollen.

For diseased cases they recommend the use of the disinfectant douche

during the latter weeks of pregnancy as more satisfactory than attempts at sterilizing the passages during labor. A one per cent. solution of lactic acid answers the purpose. The secretions gradually take on a healthy character. The douching is discontinued when the litmus test gives a constant reaction.—*Brooklyn Medical Journal*.

TREATMENT OF ABORTION.

Prof. Schauta, of Vienna, expresses his views with reference to the "Treatment of Abortion" in the *Med. Chirurg. Centralblatt*, and portions of his paper are quoted in the *Therapeutic Gazette*.

He says: "The first question to be answered before treatment is, can the abortion be prevented or not? An abortion is preventable so long as the cervix is not patent and the hemorrhage has not reached a threatening degree. He does nothing to check the bleeding, but watches the patient. If the pain and bleeding subside and the os does not open abortion has not occurred, and the patient is kept in bed for eight days after the last bleeding.

"In unpreventable abortions—that is, in cases in which the finger can enter the cervix, or when a very severe hemorrhage has occurred, the most dangerous symptom—the hemorrhage must be controlled. The abortion must be hastened, but not by emptying the uterus with the finger or curette, because of the danger of leaving fragments of membrane behind."

The following is Schauta's method: Take a strip of iodoform gauze about two yards long and three to four fingers' breadth wide, and firmly pack the entire vault of the vagina, allowing the end to hang out of the vulva. He thinks two fingers of the other hand form a better guide in tamponing than a speculum. If sacral pains occur, indicating that the embryo has been expelled, the tampon may be pulled out. If such pains do not occur, the tampon should be removed in twenty-four hours. If the abortion is not complete and bleeding still exists, it should be replaced, especially if the os is more dilated than the day before. Tamponing may be safely kept up many days if the tampon is renewed every twenty-four hours. In this way, as a rule, the intact ovum is obtained; whereas, by some energetic efforts, it is crushed.

If, however, under the tamponing the os is dilated so as to admit two fingers, but the ovum does not come away, we then interfere actively. Introduce two fingers into the uterus, and with the other hand grasp the fundus and move it about over the two fingers carefully, slowly separating the egg from the uterus; it should now be pressed out if possible; if it is too large for that, grasp it with forceps. The sac may rupture, but this is of no moment, since it is loose, and comes out whole, not piecemeal. If

bleeding still continues, the uterus itself can be tamponed in the same way as described in the case of the vagina. In the difficult cases of incomplete abortion in which part of the ovum or membrane remain in the uterus, one has to be guided by the size of the uterus. If it is large, the egg may be entire; if it is small, only membranes remain. In the former case, the treatment is as already described; in the latter case, the os must, if necessary, be dilated with rubber or glass bougees, and the uterus scraped, with the fingers always introduced as a guide.

UNCONSCIOUS DELIVERY.

Le Blond (*Journal de Médecin de Paris*, July 30th, 1893) related, at a meeting of the Medico-Legal Society of Paris, in July, the following case: A woman, aged 27, illegitimately pregnant, who had been deserted by her lover, was seized with slight colicky pains, but continued to work. During the following night she was attacked with still more severe pain. Thinking that defecation would relieve her pains, she sat upon her chamber utensil, and, upon straining, gave birth to a live child. She was greatly alarmed, but cut the cord with scissors, wrapped the infant in a cloth, and, proceeding down stairs, communicated to the people in the house what had happened. Violent flooding occurred; the cord had not been tied. Le Blond saw the case early the next morning, found the placenta still in the vagina, and extracted it. The mother and child did well. Had the child died, the mother would have been very strongly suspected of murder, especially if she had attempted to defecate in a public privy, in which case the child would have been almost inevitably killed.—*University Medical Magazine*.

VAGINAL INJECTIONS AFTER LABOR.

Eberhart (*Centralb. f. Gynak.*, No. 37, 1893) maintains that injections are always needed after delivery when there is gonorrhea, when there is any other profuse discharge, when the vaginal mucus is fetid, when the temperature rises, and when any obstetric operation has been performed. Otherwise the injections are not needed in normal labors in private practice. In hospitals they must always be used. Eberhart has seen the best results follow preliminary vaginal douches, after Kaltenbach's practice. He uses them in private, as well as in hospital. He has discarded sublimate, and employs a one per cent. lysol solution. For intra-uterine injections, lysol should always be employed.—*British Medical Journal*.

SURGERY

IN CHARGE OF

L. M. SWEETNAM, M.D. Tor.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital;

AND

A. PRIMROSE, M.B., C.M. Edin.,

Associate Professor and Demonstrator of Anatomy, University of Toronto; Surgeon Outdoor Department, Toronto General Hospital; Surgeon, Victoria Hospital for Sick Children.

QUINSY AND ITS TREATMENT BY EARLY INCISION.

At the late meeting of the American Climatological Association Dr. J. W. Brannan, of New York, read a paper in which he very ably advocates early incision in this very distressing and comparatively prevalent trouble.

The paper appears in the *Medical Record* of Oct. 28th, and from it we have taken the following:

Most cases result in the formation of pus, and until this is evacuated, either spontaneously or by incision, the patient's misery is extreme. The general practice, at the present day, is to give vent to the pus as soon as its situation can be determined. The instantaneous relief given by an opening in the right place is most striking. On the other hand, scarification of the tonsils, as is sometimes recommended, does no good, and usually aggravates the patient's condition.

I have asked the opinions of a number of medical men, including both laryngologists and general practitioners, and their answers have been pretty much to the same effect. Specialists say that the abscess is usually situated outside the tonsil, and lies in the anterior or posterior pillar of the palate or in the palate itself. They believe in giving free vent to the pus wherever found, and are convinced that the operation is attended with no danger, if properly performed.

On consulting the literature of the subject I found the most recent authorities agreed as to the location of the suppurative process and the proper point for incision. Chiari, Bosworth, and Shec state that the inflammation begins in the connective tissue about the tonsil, and usually extends into the soft palate. They advise that the opening should be made at the point I have already indicated, namely, midway between the uvula and the upper alveolar process of the affected side.

Rice, in a careful study, published some two years ago, came to the same conclusion as the above, except that he usually prefers to puncture through the anterior pillar of the fauces.

"The relations of the tonsil to the internal carotid artery are not so intimate as commonly is supposed, for between the lateral wall of the pharynx, the internal pterygoid, and the upper cervical vertebræ, there is a space filled with cellular tissue, the "pharyngo-maxillary interspace," in the posterior part of which are located the large vessels and nerves, and which lies almost directly backward from the pharyngo-palatine arch. The tonsil corresponds to the anterior part of this interspace, so that both carotids are behind it, the internal carotid 1.5 centimetre, the external carotid two centimetres distant from its lateral periphery. Hence, the danger of direct injury to the internal carotid in excision of the tonsil is infinitely small"—*Delevan*.

Zuckerkindl has made a most careful study of this region. The drawings made from his dissections show that the pharyngo-maxillary space is divided by the stylo-glossus and the stylo-pharyngeus muscles into an anterior and a posterior chamber. The anterior chamber is contiguous to the tonsil; the posterior chamber contains in its hindermost part the internal carotid artery, the jugular vein, and the vagus nerve. The two chambers are filled with fat and loose cellular tissue, and communicate with each other by a very small opening, which gives passage to the inferior palatine artery.

It is probable, as suggested by Chiari, that the anterior chamber of the pharyngo-maxillary space is alone involved in the great majority of cases of quinsy. The firm wall formed by the muscles described by Zuckerkindl prevents the passage of the pus into the posterior chamber, whereas the tissues of the soft palate yield readily to the advancing inflammation. In rare instances, however, the pus does force its way backward between the stylo-glossus and stylo-pharyngeus muscles, with the results to be indicated later.

The soft palate, through which the evacuating incision is usually made is distant in adults at least three centimetres from the vertebræ against which lies the internal carotid artery. Even in the child the space is considerable, larger relatively than in the adult. I have lately had the opportunity of dissecting a number of newborn infants, and in no case did the distance between the palatal border and the anterior surface of the spinal column measure less than 1.5 centimetre. These measurements apply to the normal pharynx. In the condition we are considering, the soft palate is pushed so far forward by the purulent collection that its anterior margin must be nearly double its normal distance from the vertebræ. An incision of even two centimetres in depth could not, therefore, possibly reach the internal carotid artery. The ascending pharyngeal artery, which has been thought to be wounded in some cases, also lies on the vertebræ, and is therefore equally out of reach of the knife.

The above cases comprise all those I have been able to find recorded in which excessive hemorrhage has followed incision of an abscess in or about the tonsil. And in no one of them was it proved that the internal carotid artery was wounded by the knife of the surgeon. But there is another danger to be considered in operating on a phlegmon of the fauces, which has been alluded to in the histories of the cases of Duke and Murphy. A number of instances have been reported of fatal hemorrhage in quinsy in which autopsy showed an eroded or ruptured artery, generally the internal carotid. Both Bosworth and Chiari mention the occurrence of this accident, but neither one connects it with the operative interference of the attending surgeon. And yet it is the evacuation of the abscess into the pharynx, whether spontaneously or by incision, that causes the rupture of the weakened walls of the artery, or allows free escape of the blood already outside of the vessel, but pent up in the pharyngo-maxillary space.

It has long been held by surgeons that the walls of arteries are proof against the destructive action of pus, so that even prolonged contact with it does not cause perforation of the vessel, unless there be local mechanical irritation, as from a drainage tube or a bony sequestrum. When Liston reported his celebrated case of spontaneous perforation of the common carotid artery fifty years ago, the London Medical and Surgical Society refused to incorporate it in their Transactions, and he was obliged to publish it at his own expense. Since that time, however, other cases, equally striking, have been recorded, and it can no longer be doubted that spontaneous ulceration of arteries does occur simply from the corrosive action of pus.

Vergely believes that the vicinity of the air passages is the great local exciting cause of the accident. Micro-organisms and foul gases are constantly inspired and expired, and may easily give a septic character to the pus in the neighborhood. According to Varneuil, the outer arterial coat becomes thickened in an abscess cavity, if neither fever nor septicemia occurs. But if these complications arise, the protecting cover disappears and the artery is denuded. In angina the pus and gases confined in the pharyngo-maxillary space kill the arterial wall before compensatory hypertrophy has time to take place. Probably the septic character of the pus, combined with pressure, are the important agents in eroding the artery. Hence the supreme importance of relieving the tension of the parts even if suppuration has not yet taken place. Bosworth tells us that we may expect the formation of pus by the end of the second or on the third day. In protracted cases, lasting ten days or two weeks, suppuration is not delayed, but the abscess is probably deeply seated in dense tissue and approaches the surface slowly.

Conclusions. (1) In quinsy, the inflammatory process is usually situated without, and not within, the tonsil. (2) If pus forms, it should be evacuated at the earliest moment possible. (3) Unless there are signs of pointing elsewhere, the incision should be made through the soft palate directly backward. (4) If the tension of the parts is very great, the incision is indicated, even though pus has not formed. (5) If ordinary surgical care is exercised, there is no danger of wounding the internal carotid artery. (6) In cases of deep-seated inflammation, in which the pus comes to the surface slowly, erosion of the arteries in the neighborhood may take place. In such cases, therefore, we must be ready to deal with arterial hemorrhage at the moment the abscess discharges into the pharynx.

ONE OF THE BEST APPLICATIONS OF IODOFORM IN SURGERY.

The odor of iodoform, the mental association with venereal disease, and a failure on the part of the profession generally to appreciate the necessity of using a thoroughly sterilized article, are responsible for its comparatively limited application. Lane, in a recent number of *The Lancet*, suggests for it a new application.

In erasing tuberculous joints where the bones entering into their formation contained cavities, often of very considerable size, he has used iodoform very largely, not so much with a view of inhibiting the growth of organisms in the synovial cavity, but as a firm packing to occupy the cavity in the bone, which would otherwise be filled with blood, and would form a very formidable nidus for the growth of tubercle bacilli. In such a joint as the knee or ankle, where every particle of synovial membrane can be thoroughly and effectually removed, there is not the slightest chance of recurrence, for the reason that the retention of a drainage tube for forty-eight hours with firm pressure insures the accurate apposition of living tissues, all blood and other effusions having been driven out through the tube by the pressure of a flannel bandage, firmly applied. Where, however, a large cavity has been left in a bone, no amount of external pressure can influence it, and it must of necessity remain filled with blood and be a source of danger to the individual. Such a cavity he treats in the following way, and up to the present has never known it to fail: An Esmarch's bandage being applied above the joint to control the circulation, the joint is erased, and any cavity in the bone is thoroughly cleared out and the hole carefully dried with sponges. Some iodoform is then washed with 1 to 20 carbolic lotion, and poured on to a piece of lint and squeezed as dry as possible. It is then introduced in masses into the cavity in the bone and stamped firmly in, much as a dentist fixes a gold stopping in a carious tooth, and when the cavity has been completely

filled the surface of iodoform is planed down level with the surrounding bone.

It will be noted that the above method of administering iodoform differs altogether from its employment as an emulsion. Lane uses the iodoform as a packing to occupy for a sufficient length of time—with a solid material which contains no organisms, and in which organisms cannot grow—a cavity which would otherwise contain blood in which micro-organisms might readily grow, especially if they were present in other parts of the body, this packing being gradually removed and replaced by bone.—*Therapeutic Gazette*.

THE TREATMENT OF CARBUNCLE BY CARBOLIC ACID INJECTIONS.

In reporting several cases of carbuncle treated by injections of carbolic acid (*Medical and Surgical Reporter*), Dr. Wilkinson, Galveston, Texas, says :

I usually add to ten minims of pure carbolic acid as many drops each of alcohol and glycerine, and have then as much of the injecting fluid as would be needed to cure the largest-sized carbuncle. One grain of cocaine might be added to the above to insure freedom from pain in its administration ; but this is hardly necessary, as the carbolic acid itself soon acts as a local anesthetic, and the little smarting that attends its use only lasts about a minute.

An ordinary hypodermic syringe is generally employed to inject this fluid with, though a Heaton hernia needle is preferable on account of being supplied with a blunted point. Of the foregoing mixture, twenty minims should be injected right and left through the tumor, care being used to throw the fluid out towards the inflamed periphery until all portions of the carbuncle have been reached. Any excess of fluid which may ooze back through the sinuses should be picked up with clean blotting paper, and after every such injection a soft pad of absorbent cotton should be bandaged down upon the growth. Usually, one of the injections will suffice, but occasionally it may be found necessary to repeat the operation in the course of forty-eight hours, should the first not be sufficient to allay the inflammation.

It is true that some care and nursing will be required in the retrograde stage of carbuncle poulticing. Strapping and silver applications will probably be required to expedite healing ; but, the specific nature of the sore having been destroyed by the acid, we have left only a simple, healthy ulcer to look after for a few days, instead of a malignant and tormenting affection.

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

Assistant Demonstrator of Anatomy, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College;

AND

B. E. McKENZIE, B.A., M.D.,

Lecturer on Orthopedics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

FERRIC CHLORIDE IN DIPHTHERIA.

Braun (*Allgemeine Wiener Med. Zeit.*, No. 38, 1893) gives his experience in the treatment of diphtheria by ferric chloride. The author's attention was directed to the favorable experiences of Hübner and Rosenthal with solutions of perchloride of iron. His own trials with this medicament were exceedingly satisfactory, and he introduced a form of application—an ointment instead of a solution—which will, he is convinced, reduce the number of deaths to a minimum if universally and exclusively persisted in. The internal administration of two per cent. ferric chloride did not, as Rosenthal stated, prevent the further development of the disease, but, applied locally, Braun found that it left nothing to be desired. His ointment was composed as follows: R.—Ferri perchlor., 4 drachms; ung. lanolini, 1 oz. It possesses many advantages over a liquid preparation. Applied on a plug of cotton wool firmly fixed to the end of a probe, the membranes can be easily cleared away by a slight rotary motion, while at the same time a portion of the ointment is left on the affected part. The remedy can be used in a very concentrated form, none being swallowed, and the unctuous nature of the application allows the operation to be conducted with such delicacy that energetic action can be secured without any complaint from children of violent pain or burning. There is also no fear of producing wounds which might afford fresh means of entrance for the diphtheritic poison. Another advantage of using lanolin for this ointment is not only that the exposed surfaces are well covered, but portions of the mixture adhere firmly to the mucous surfaces, and thus exercise their action for a prolonged period. On these grounds, as well as on account of the aseptic nature of lanolin, it is preferable to all other ointment bases for the purpose. It is observed in this treatment with ferric chloride lanolin ointment that the affected parts are colored brown for ten hours or more, whilst the unaffected parts are hardly discolored. The ointment appears, therefore, to act only on those parts where the mucous coating is already destroyed by the diphtheritic process.—*British Medical Journal*.

PERIPHERAL NEURITIS FROM LARGE DOSES OF ARSENIC IN THE
TREATMENT OF CHOREA.

At the October meeting of the Manchester Clinical Society Dr. Railton, the president, showed a girl, aged ten years, who had been treated at the Manchester Clinical Hospital with Fowler's solution for chorea of three months' standing. In three weeks the chorea was cured. The doses given were as follows: 5 drops three times a day for three days; 10 drops three times a day for three days; 15 drops three times a day for fifteen days. Total for the twenty-one days, $13\frac{1}{2}$ drachms of Fowler's solution, equivalent to $6\frac{3}{4}$ grains of arsenious acid. During the course she showed symptoms of stomach derangement, and two days after the discontinuance of the medicine she was noticed to be desquamating freely. Ten days later she could not walk alone, and complained of pains in her arms and legs, the latter being particularly sensitive to pressure. When she put her feet down she felt "pins and needles." She could not button her clothes. Thus motor paralysis, sensory trouble, and ataxy were present. The knee jerks, which were very active before treatment, were lost; she could not flex the feet upon the ankles, and if, when supported, she tried to walk, she showed the soles of her feet completely from behind. The affected muscles of the legs had lost their faradic reaction, and showed the reaction of degeneration with the voltaic current. She could not touch the little finger with the thumb on the right side. The urine was slightly albuminous. The president mentioned nine other cases of children whom he had treated with 15-drop doses of Fowler's solution, three of them for a week only, and the rest for a fortnight. Seven had vomiting, one diarrhea, three herpes zoster, two erythema, and one had peripheral neuritis, though not so severely as the case above mentioned. In all cases the chorea was cured at the end of the treatment. He considered that 15-drop doses were too much if continued for more than a week, and had determined not to administer this dose for longer than that period in future.—*British Medical Journal*.

ETIOLOGY OF INCONTINENCE OF URINE IN CHILDREN.

In a paper read before the American Pediatric Society, Mr. B. K. Rachford considers the causation of urinary incontinence, and believes that the three great factors in its production are: (1) Irritable and unsteady nerve centres; (2) anemia, with consequent malnutrition; (3) reflex stimulation of certain nerve centres in the lumbar cord.

In the majority of cases these three factors exist, but they do not exist in all. For example, we may have incontinence without anemia, and anemia without incontinence. We may also have incontinence without

apparent reflex irritation, and reflex irritation without incontinence. It is not sufficient, therefore, to say that adherent prepuce, vesical irritation, or some other reflex cause, is the cause of incontinence of urine; neither is it sufficient to say that anemia with malnutrition is the cause of the condition; nor can we say that neurotic inheritance is, as a rule, sufficient to produce incontinence, since a great majority of nervous children do not suffer in this way. A rational enquiry, therefore, into the etiology of this condition must consider not only how each of this tripod of factors may act in producing incontinence of urine, but it must also inquire into the interdependence and relationship of these factors. The author, in the course of his paper, gives the following lucid description of the mechanism of micturition:

"That one may understand the importance and relationship of the above-named factors in producing incontinence, it will be necessary to keep in mind the mechanism of micturition. One must remember that the longitudinal and circular muscular fibres of the bladder, which by their contraction empty the bladder, are enervated by sensory and motor nerves from the lumbar region of the cord, and that the external sphincter in the prostatic portion of the urethra, which by its contraction prevents the escape of urine from the bladder, is also enervated by sensory and motor nerves from the lumbar cord. Dr. Von Zeissl's recent researches on the innervation of the bladder gives us a better understanding of this subject. He found that the 'erector nerve' was not only the motor nerve of the muscular coat of the bladder, but that it was the inhibitory nerve of the sphincter vesicæ, and that the 'hypogastric nerves' carry motor fibres to the sphincter vesicæ and inhibitory fibres to the muscular coat of the bladder itself. These researches of Von Zeissl make plain the manner in which reflex causes may act in starting or checking the flow of the urine. For example, a reflex carried to the proper centre in the lumbar cord would, through the motor fibres of the erector nerve, contract the muscular coat of the bladder, and through the inhibitory fibres of the same nerve relax the sphincter vesicæ, and in this manner allow the urine which is being expelled by the contracting bladder to pass without hindrance through the relaxed sphincter vesicæ. This is indeed a simple and beautiful nervous mechanism that must be understood if we would understand the etiology of incontinence of urine. But another important fact must also be remembered in this connection, and that is that the act of urination is in part under the control of the will. We will to urinate or not to urinate, and the message passes down to the centres in the lumbar cord where, by the mechanism just described, the reflex is completed."

TREATMENT OF ENLARGED CERVICAL GLANDS.

Dr. Clifford Allbutt, in opening the discussion at the August meeting of the British Medical Association, expressed his views regarding the mode of production of disease in these glands, and outlined its course in the following terms :

"It is probable that in the absence of pathogenic microbes glandular enlargements may occur in the presence of an excess in the products of destruction, but that they are mild and transitory. It is probable that scrofulous neck is always due to the entrance of a pathogenic microbe, generally by way of the tonsil. It is also probable that more than one microbe may enter into some such series—that, for example, the bacillus of tubercle may follow, and carry on the work of Loeffler's bacillus, or of the hypothetic microbe of scarlatina ; and ordinary pyogenic cocci may follow any of these.

"Hyperplasia of the smaller adenoid masses is probably of no nosological importance. Hyperplasia of the larger masses, when it does not exceed the limits which we conveniently call 'physiological,' recedes without serious injury to the patient, and may be a beneficent process. When hyperplasia of these masses passes beyond physiological limits, it may lead, and commonly does lead, to necrosis. In the majority of cases, this necrosis is not extensive, the dead stuff is removed more or less quickly, and health is restored.

"When the hyperplasia is more excessive, and the necrosis extensive, there is not only much to be done in the removal of the defenders of the city who are dead, but also in the accumulation of the dead we find new centres of dispersion of evil ; either in the dead matter microbes find a favorable bed, or the products of decomposition, by weakening the tissues around, render them more vulnerable, or less capable of defence.

The supervention of such secondary events establishes a secondary pathological series which may have no term within the boundaries of systemic life, or against which there may be no barrier. If the process be less intense, or the patient more vigorous, a cure may be indirectly attained by corroboration of the vital powers of the patient, isolation of the mischief, and attenuation of the process in time. Of direct cure there is none by way of medication. If the process be more intense, or the patient be less vigorous, the morbid series may, by implication of additional areas, or by systemic poisoning, end in systemic death ; or, if it have a term short of this, may result in serious constitutional injury and in ugly local injury."

Continuing the discussion, Dr. Pridgin Teale advocated early removal of the affected glands as being the only reasonable procedure, expressing

at the same time his disbelief that the gland could be at all affected by such treatment as painting the skin with iodine, etc. In order that the glands may be removed with the least possible disfigurement Dr. Teale recommends :

(1) Whenever fluid—that is, pus—can be detected in connection with a diseased lymphatic gland, the operation should be done before the skin becomes red and thin—that is, before the skin has been spoiled by advancing suppuration.

(2) When the diseased gland is subcutaneous—that is, not beneath the deep fascia or muscle—and has been completely removed, the least scar will result if neither stitches nor drainage tube be used, especially if it be possible to leave the wound uncovered by dressing and exposed to the air so that the edges may be drawn and glued together by drying lymph.

(3) If the diseased gland be beneath the muscle or muscular fascia, then a drainage tube must be used, and the edges of the wound must be united by suture. For this purpose probably horsehair or silkworm gut well soaked in carbolic lotion are the best sutures. The best drainage tube is the gilt spiral wire, especially as it may have to remain from two to eight or ten weeks, according to the depth of the wound, or the completeness of the removal of the gland.

(4) Where many glands have to be removed, it is better, so far as may be, to remove them through a series of small incisions, and thereby to avoid very extensive ones.

LINEAR CRANIOTOMY IN MICROCEPHALUS.

Clayton Parkhill (*Intern. Med. Magazine*, Nov., 1893) reports two cases of microcephalus in which he performed linear craniotomy. In one of these the patient was a boy, aged 4 years and 8 months, who is described by the author as a "hopeless idiot." His head was markedly microcephalic and conical, owing to the lack of development of the frontal and parietal eminences. With antiseptic precautions, a piece of bone was removed on the right side of the median line, so as to make an opening $6\frac{1}{2}$ inches in length and $\frac{3}{4}$ inch in its greatest width. On the eighth day union had taken place by first intention. Within twenty-four hours after the operation, the child's expression was better, and he had lost the restlessness which had formerly characterized him. By the end of a week he would play continuously with objects, and amuse himself for hours with picture books. Eleven weeks after the first operation the left side was operated on in a similar manner, except that an additional bone incision, $1\frac{1}{2}$ inches long by $\frac{1}{2}$ inch wide, was made, extending downwards toward

the ear from the middle of the long bony wound ; this second opening was made with the object of freeing the speech centre. Union by first intention was perfect when the wound was first dressed on the tenth day. The result of the operation, in the words of the author, is that the child "has been converted from a condition of drivelling idiocy into one of fair intelligence in these short months. His development has been quite twice that of the average child under normal conditions." In the other case, the patient was a girl, aged 5 years and 9 months, unable to utter a single word, and giving no sign of intelligence. In the second case but one side had been operated upon, and at time of report no improvement had been noted.

TRANSPORT OF TUBERCLE BACILLI.

The trains of women's dresses constitute a means of carriage of tubercle germs and other micro-organisms which should not be underestimated. During their use on the street and public localities, dress trains continually pick up sputa, which may dry on them, and so find their way into the living room. Dixon made examination of a small quantity of dust taken from a dress which had been but a few times on the street, and in one preparation found seven tubercle bacilli.—Dixon, *Times and Register*, No. 704.

TRANSMISSIBILITY OF TUBERCULOSIS.

Solles, in the *Journ. de Méd. de Bordeaux*, reports that he has inoculated two guinea-pigs, one with fluid expressed from the testicle of a tuberculous subject, the other with fluid from the seminal vesicle of a tuberculous patient. In the first case the result was negative, but in the second a general tuberculosis developed.

I. ELECTROLYSIS IN THE TREATMENT OF FIBROUS ANCHYLOSIS.

DWYER (NEW YORK).

The treatment of fibrous ankylosis by forcible movement of the joint is generally unsatisfactory. The treatment of six cases by electricity is given in detail, with the following results :

CASE 1. Pain which had persisted for three months (injury to shoulder) was relieved at once ; circulation improved ; motion and general usefulness greatly increased. Duration of treatment, 25 days.

CASE 2. Disease of wrist joint and ankylosis of all joints of the hand. Duration of treatment, 37 days. Motion and usefulness greatly increased.

CASE 3. Limited motion (35°) at elbow after fracture of external condyle. Treatment for 7 days. Arc of motion increased to 78° .

CASE 4. Disability of hand after Colles' fracture. Treatment for 16 days. Circulation improved; flexion and extension increased from 18° to 60° ; lateral motion from 9° to 32° . Motion and usefulness of fingers much increased.

CASE 5. Pain and stiffness of elbow joint from syphilis. Operation for clearing the olecranon fossa of a bony growth, after which there was a motion through an arc of 10° . Duration of treatment, 10 days. Motion 45° .

CASE 6. Complete ankylosis of the elbow joint at a right angle. Operation to remove bony union between ulna and radius. Treatment by electricity commenced ten days after operation, and continued eight days. General circulation much improved. Gain in flexion and extension 47° .

Two of these cases were followed up, and results were found to be permanent. The galvanic current was used for a period from ten to thirty minutes, and repeated at intervals varying from one to five days.—*Annals of Surgery*, August, 1893.

II. ANCHYLOSIS OF ELBOW JOINT AFTER TREATMENT OF FRACTURE OF LOWER END OF HUMERUS, HAVING FOREARM EXTENDED. WRIGHT (BROOKLYN).

Ten cases were treated by the author, who makes the following statements:

(1) An upper limb with a stiff elbow joint, having the forearm extended, is a source of much disability and discomfort.

(2) Right-angled deformity would be much more useful.

(3) Ankylosis may result whether the forearm be kept flexed or extended during treatment.

Five cases were treated by exsection, in none of which could the ankylosis be broken up with safety. The disability in every case was found to be very great, and could be relieved only by operation. The author holds that these cases should have been treated originally by putting up the fracture with the forearm flexed at an angle of 90° .

The usefulness of the limb was much improved in every case.

Four cases were treated by infraction.

CASE 6. Boy of nine. After fracture of both condyles, arm was dressed on splint at an angle of 135° . Ankylosis. Eight months' treatment necessary to bring arm up to a right angle.

CASE 7. Boy of twelve. Fracture of external condyle and dislocation. Had been treated on anterior splint at an angle of 135° . Infraction and recovery at angle of 90° , with slight motion.

CASE 8. Man, 49. Fracture at elbow had been treated by anterior splint, arm being fully extended. Anchylosis. More than half normal motion after infraction.

CASE 9. Young woman, 18. Fracture of lower end of humerus had been treated by a splint at angle of 135° . Anchylosis. Infraction, improvement.

CASE 10. Man of 45. Fracture had been treated by a nearly straight anterior splint. Slight motion, but not flexion sufficient to be useful. No treatment.

These cases are adduced by the author as evidence relevant to the issue bearing upon the position of the forearm during treatment of fracture at the lower end of the humerus.—*Annals of Surgery*, August, 1893.

III. THE TREATMENT OF SENSITIVE SPINES. LOVETT (BOSTON).

Attention is called to a sensitive, painful condition of the spine marked by nervous symptoms and simulating organic disease of the vertebræ. There is no angular deformity, but extreme sensitiveness to superficial pressure. Spine is generally flexible, but may be held rigid. Neurasthenic symptoms generally prominent.

The severer cases should have rest in bed, feeding, massage, and faradic electricity. Next, after some days or weeks, gentle exercises are given, calling into play the erectores spinæ muscles. Walking is then encouraged, and a spinal brace may be permitted as a temporary measure.—*Boston Medical and Surgical Journal*, July 16, 1893.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist to Toronto General Hospital and Home for Incurables.

MILCH COWS AND DIPHTHERIA.

In the nineteenth annual report of the Local Government Board (supplemental report of the medical officer, London, for 1889-90) Klein published the result of a series of experiments on cows and calves with the poison of diphtheria. Circumstances connected with several outbreaks of diphtheria had given rise to the suspicion that the disease was spread by means of milk supplied to the families in which it appeared. Granted that the virus had been carried and communicated by means of milk, it remained to be decided whether infection of the fluid had taken

place whilst it was being transported from place to place, or whether it had received the germ from the cow. It is said that in at least three outbreaks, in England, there was no evidence that the milk had been infected by those through whose hands it had passed.

Klein inoculated two sound cows with a pure culture of the diphtheria bacillus. In both cases similar lesions resulted; one animal died in twelve days, the other was killed on the twenty-fifth day, being in a dying condition. The points of chief interest in the morbid anatomy in these two cases were the appearance of a tumor, composed of exudate and necrosed tissue at the seat of inoculation, and of a vesicular eruption upon the udder and teats. In the tissue of the tumors and the lymph of the vesicles diphtheria bacilli were found, and cultures obtained therefrom. Early bacteriological examination of the milk in these cases also demonstrated the presence of the same germ, but when undertaken later the results were negative. That the outbreak upon the udder and teats was infectious was proven by inoculating calves from the vesicles, with the result that a precisely similar eruption developed. The deduction from these experiments is easily made.

Examination of an article in the October number of the *Journal of Pathology and Bacteriology* (1893) will show that the results of Abbott's experiments do not at all bear out Klein. Abbott also inoculated two cows with pure cultures of Loeffler's germ, and, very curiously, made use in one instance of a tuberculous animal for his experiments. Klein would probably and, rightly, decline to accept results from such a source if they negated his. Abbott found the bacillus at the seat of inoculation only; no eruption of any kind, nor abnormal change was seen in connection with udders or teats; the milk gave negative results after "careful and prolonged study"; no internal lesions, such as Klein describes, were found. Evidently, further investigation must be undertaken before a definite verdict can be given.

W. T. COUNCILMAN ON GONORRHEAL MYOCARDITIS.

There have always been two opinions held about the secondary infections following gonorrhea; one that they are due to the accidental infection with other organisms which enter through the lesions in the urethra, produced by the disease. Gonococci have been found by various observers in these secondary lesions. Other observers have failed to find them. The most prominent secondary lesions consist of the various joint affections, of peri- and endo-carditis, and of inflammation of the neighboring lymph glands giving rise to the bubo. Chronic inflammation of the Fallopian tubes in the female is now very generally regarded as due to a pre-

vious infection with gonorrhea. In a case recently seen at the city hospital there was an acute urethritis, acute inflammation of the joints, and an extensive peri- and myo-carditis. Gonococci were found in all of these places. The lesions in the urethra closely simulate those described by Bumm in his experimental work on the disease. The gonococci were found only in the superficial layers of the epithelium. In the sub-epithelial tissue there was marked round-cell infiltration. It appears probable from a general consideration of the secondary infections that they are true infections resulting from the presence of the gonococci. In the cases in which organisms have not been found, it is very possible that they were so few that the ordinary microscopic investigation would not reveal their presence. That the affection is not due to the presence of pus organisms is shown from the fact that cultures made from these secondary lesions are so generally sterile.—Transac. Assoc. Am. Phys., Rep. *Boston Med. and Surg. Jour.*, Sept. 7, 1893.

STUDY OF THE PART PLAYED BY EBERTH'S BACILLUS IN CAUSING
COMPLICATIONS OF TYPHOID FEVER.

Deluc (*Jour. Internat. de Bibliog. Med.*) has set forth the results of his study as follows :

(1) Suppurations in the skin and subcutaneous tissues, in whatever form they may appear, as erythema, furuncles, or abscesses, are due to staphylococci.

(2) Lesions of organs in the vicinity of the mouth, the parotid, pharynx, larynx, and middle ear, depend upon streptococci; the pneumococcus and staphylococcus sometimes are active here also.

(3) Subacute peritonitis due to perforation is caused by the bacillus communis coli, whilst the encysted form propagated from within is due to the bacillus of Eberth.

(4) Splenic abscesses and those formed in mesenteric lymph glands are caused by Eberth's bacillus, as also chronic latent affections of the bile ducts.

(5) Suppurative processes in the kidneys and liver are manifestations of pyemia; they are rarely isolated, and not often primary. The spleen also, in virtue of its function as chief collector of impurities from the circulation, is exposed to like accidents.

(6) In the respiratory apparatus, the infectious origin of bronchitis and congestion has not been proven; splenization is often excited by Eberth's bacillus; lobar pneumonia is always caused by the diplococcus; broncho-pneumonias are most commonly secondary infections due to streptococci, and occasionally to the germ of Friedlander. The possibility, however, of a broncho-pneumonia due to the typhoid germ seems

to have been demonstrated. As regards pleurisies, observations are too few to permit of a similar statement.

(7) In the nervous system meningitis only deserves special mention. The bacillus coli communis, diplococcus, bacillus typhosus, and pyogenic cocci seem equally concerned in its causation.

(8) Endocarditis and primary enteritis are perhaps due to Eberth's germ. Evidence is wanting in respect of phlebitis.

(9) Of glands, the testis and thyroid are most frequently attacked. The latter only lends itself to abscess formation when it is undergoing cystic degeneration. Eberth's bacillus commonly excites glandular inflammations.

(10) Finally, periosteum and bone are the tissues which the bacillus typhosus prefer to attack, especially in young subjects, and in virtue of their frequency osseous inflammations are the most important of all the complications of typhoid fever caused by this germ.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto; Surgeon to St. Michael's Hospital;

AND

E. HERBERT ADAMS, M.D., D.D.S.

GAS ACCIDENTS.

Two destructive as well as instructive accidents, one in the city of Brooklyn and the other in New York, have occurred quite recently. In Brooklyn a small lad poked an ignited piece of wood through a hole in a sewer manhole cover, and the result was an immediate explosion of illuminating gas, which had escaped into the sewer from leaking gas mains. Fifty feet in length of a large sewer were thus blown up. Fortunately, however, no one was killed, though a number were injured. The incident illustrates how modern improvements, apparently of an innocent sort, may secretly create unseen and unsuspected dangers. The accident in New York terminated more fatally. Three policemen, accompanied by another man, entered a toilet house in Central Park to take a comfortable snooze in the night time. Through the sewer connections illuminating gas, leaking from mains into the sewer, passed up into the house in such quantity that three of the men were killed by breathing it, and the fourth was taken to a hospital nearly dead. This indicates a possible danger arising from leakage of gas in sewers that is rarely suspected by people in general—the escape into buildings with unguarded sewer connections of illuminating gas issuing from defects in city gas mains.

PREVENTION OF TUBERCULOSIS.

At the meeting of the section of Hygiene, Climatology, and Demography of the Pan-American Medical Congress held in Washington, D.C., September 5, 6, 7, and 8, 1893, the following resolution, moved by Dr. P. H. Bryce, of Toronto, and seconded by Dr. Lawrence F. Flick, of Philadelphia, was carried :

Resolved, that in view of the fact that tuberculosis causes more deaths than any other disease, that it is now known to be communicable, especially to persons living in houses and shops with consumptives, that the attention of the national, state, and municipal authorities be directed to the necessity for controlling the dissemination of the disease : (1) By notification by physicians and landowners. (2) By the registration of the residences of the tubercularized. (3) By controlling their movements so far as possible. (4) By the establishment of hospitals and homes for the infected poor.

LIFE-SAVING RESULTS OBTAINED THROUGH A STATE BOARD OF HEALTH.

The Michigan State Board of Health began its work in 1874. During the five years previous to that date the average annual death-rate from scarlet fever had been 4.85 in 10,000 inhabitants, but during the fourteen years from 1874 to 1887 the rate was only 2.45 in 10,000.

The rates for smallpox calculated for the same periods of time were 8.5 and 1.9 in 100,000.

Typhoid was also materially decreased, though not in so great a proportion.

The State Board have now enacted that tuberculosis shall be reported to the medical health department, and are entering on a crusade against that disease. There is little doubt that the results from preventive laws will be as beneficial in tuberculosis as in the case of scarlet fever, smallpox, and typhoid.

NOTIFICATION OF TUBERCULOSIS.

The Philadelphia County Medical Society has appealed to the Board of Health of Philadelphia to place tuberculosis upon the list of contagious diseases to be reported to the board.

CONSUMPTION IS A DISEASE DANGEROUS TO THE PUBLIC HEALTH.

The following resolution was adopted by the Michigan State Board of Health, September 30th, 1893 :

"Resolved, that hereafter consumption (and other diseases due to the bacillus tuberculosis) shall be included in the official list of 'Diseases Dangerous to the Public Health,' referred to in sections 1675 and

1676 Howell's statutes, requiring notice by householders and physicians to the local health officer as soon as such a disease is recognized."

(In this resolution the question of isolation of the patient is not mentioned. Its purpose is to secure to the local health authorities and to the State Board of Health information of the location of each case of this most dangerous disease, with the view of placing in the hands of the patient reliable information how to avoid giving the disease to others, and in the hands of those most endangered information how to avoid contracting this disease.—HENRY B. BAKER, Secretary.)

HEART FAILURE.

"It is further provided that certificates of death giving 'heart failure' as the only cause of death shall not be deemed sufficient upon which to issue a burial or removal permit, and such certificate must be returned to the physician who made it for the proper correction and definition."—*Laws of Connecticut.*

BACTERIOLOGICAL EXAMINATIONS MADE IN DIPHTHERIA BY THE HEALTH DEPARTMENT, NEW YORK CITY.

About a year and a half ago, Dr. Park made a series of observations on patients at the Willard Parker Hospital who were suffering from diphtheria, with reference to the presence of the Loeffler bacillus. It was shown that a considerable portion of the patients entering the hospital with supposed diphtheria were in reality not suffering from diphtheria at all, but from pseudo-diphtheria, accompanied with the production of a membrane. In the winter and early spring, when various throat affections were prevalent, more than 50 per cent. of the cases admitted were not diphtheria. The bacteriological examinations tallied closely with the clinical results.

As a result of these examinations, early in the present year the health department began to make systematic bacteriological examinations of all cases of diphtheria. Physicians obtained culture tubes from the department for making inoculations. After being inoculated, these are returned to the department for examination. Such examinations have been of considerable service in the United States, and might be utilized to advantage in Toronto.

Editorials.

THE MEDICAL COLLEGES.

NOTWITHSTANDING the fact that the new regulation of the Medical Council requiring students to take a five years' course before obtaining a license has come into force, we understand there is no serious falling off as to numbers in attendance at the various medical schools. As it is painfully evident now that there are too many doctors in the country, and that they are being manufactured with a rapidity quite disproportionate with the increase of population, the question, so often asked, how will they all make a living? becomes more pertinent from year to year. It happens, however, that such overproduction is not at all peculiar to the profession of medicine. The other professions are, perhaps, equally overcrowded. Law, especially, is full to overflowing, and the lawyers on the lower rungs are, in the words of the ordinary vernacular, "awfully hard up." Outside of the professions a somewhat similar condition of things exists in probably all occupations excepting one—that of farming. Our country wants more hard-working agriculturists, and less doctors, lawyers, merchants, etc.

However, young men do not seem inclined to stay on farms, notwithstanding any erudite lectures, but rush to cities; and many of them keep falling into medicine. Under such circumstances, it becomes the duty of the medical colleges, more than ever, to keep fully abreast with the times, in view of the fact that only the "fittest" are going to have much of a chance in the big struggle before them. It is only fair to say that the schools appear to appreciate these facts, and are putting forth their best efforts to satisfy the ever-increasing wants of the students.

Speaking for Toronto, we have every reason to believe that the students of to-day are better in almost every respect than those of a few years ago. They are, as a rule, worthy young men, thoroughly imbued with a strong desire to make the best possible use of their time during their undergraduate course. The facilities placed at their disposal, especially for practical work, are probably better than they were ever before in Canada. The laboratory and hospital teaching is admirable in all respects, and probably quite equal to any afforded to undergraduates in any part of the world.

LODGE PRACTICE.

WE publish in this issue a communication referring to the vexed subject of lodge practice. A number of practitioners residing in Trenton, Ontario, have decided not to do what is ordinarily known as contract or lodge practice, and attached their names to a document containing pledges to that effect. This document contains the signatures of all the physicians in the town excepting one.

During the last few years this form of contract work has been growing, and has now assumed such proportions that it has called forth serious condemnation from various quarters. We may say without any hesitation that we object seriously to this class of work, but we regret exceedingly that we are unable to find any one who is able to furnish a satisfactory solution of the difficulties which surround the whole subject.

Lodge practice has been made legitimate, if not respectable, by custom. It is upheld by a powerful section of the lay press. Many of our young and worthy practitioners are practically making their living by it. Many of these freely acknowledge the evils connected with the system, but cannot afford to throw away their bread and butter.

The best way to abolish the practice is by united effort. The course of the physicians in Trenton is the correct one to pursue, but, unfortunately, one man refuses to come into the agreement. We know nothing of the merits of the case, nor the reasons which this practitioner may have; but his obstruction to the scheme is a serious matter, and may in time kill it altogether. If, however, all were agreed, and gave their pledges to do no lodge practice, it unfortunately happens that the ubiquitous lodge doctor is easily found, and readily imported. However, we shall watch the results in Trenton with interest, and hope that the physicians who are working in the right direction will be successful. If so, other towns and cities will probably follow their good example.

BREACHES OF THE MEDICAL ACT.

JUDGING from recent occurrences, it behooves medical practitioners in the Province of Ontario to look to it that in their attempts to give practice to medical students during those months of the year in which the schools are closed they do not expose those whom they intend to befriend to the danger of arraignment by the Medical Council and its detectives as breakers of the Medical Act. In a recent issue of the *Empire* newspaper, of this city, appears a paragraph, of which the follow-

ing is a part : " Detective Wasson is making matters warm for the medical men throughout the province who are given to faking. On Saturday he had these gentlemen before the magistrates and fined \$25 and costs for breaches of the Medical Act." Then follow the names of the individuals accused, with their addresses. The facts in one of the cases are these : A student in medicine of the University of Toronto who had completed his third year, supposing that it was necessary that he should spend a certain time in a doctor's office before completing his course, made application to a medical man in good standing and was accepted as his student, his duties being partly in the doctor's office and partly in his dispensary. Towards the close of the summer the doctor took advantage of the young man's presence to go off on a holiday. He paid the student's board bill for the time, and also told him that he would pay him something for his trouble. By some means the council's detective became aware of the facts, laid an information for breach of the Medical Act, and had the young man fined. Not content with causing the trouble attaching to such a procedure, the detective, or other official of the council, gave the newspapers (it appeared in three of them) the name and address of this unoffending student, and caused him to be published as a fakir.

Now, whilst we know nothing whatever of the other men mentioned as "faking," we do know that the one of whom we speak is a *bona fide* medical student, and one incapable of infringing upon the "spirit" of the Medical Act. Whether he has broken it in the letter, we do not know. A certain gentleman connected with the council, being spoken to with regard to this case, said that of course the council knew nothing of it, that the detective alone was responsible, that they were sorry it had happened, but that it could not be helped. Surely the council does not put itself in its detective's hands, and undertake to maintain his cause at all hazards?

The profession will certainly uphold the council in its efforts to suppress men who practise as students under cover of a regular practitioner's name, and who make no attempt to pass examinations, and who are not assistants in any proper sense of the term ; but we are much mistaken if it will permit *bona fide* students to be harried by a subordinate official who has a money interest in their conviction as offenders against the law.

THE MEDICAL DINNERS.

Opinions are divided as to the advisability of having annual dinners in our medical colleges. Some think that the students lose more time than they can afford in completing their organizations, and in making their arrangements ; and that, consequently, it would be better, in the

interests of medical education, to have no dinner. We are inclined to sympathize with such views, especially in consideration of the fact that the courses of studies now imposed on students are exceedingly heavy.

However, the students in the past have been allowed to decide the matter, and the same rule is likely to prevail in the future. The marked success which has attended the dinners in Toronto this year makes doubters pause and consider carefully whether it is wise in the future to throw cold water on an institution which the custom of many years has made popular.

The dinner given by the students of the Medical Faculty of the University of Toronto at the Rossin House on the evening of December 6th was, in many respects, a remarkable one. Its success far surpassed anything of the kind that the writer has ever seen. The officers elected by and from the students left no stone unturned in their efforts to have everything right, and "the boys" supported them *all along the line*.

The Vice-Chancellor (who, by the way, was very enthusiastically received by the students) remarked privately, after the banquet, that it was the most orderly and successful gathering of university men he had ever attended. The Minister of Education said that he had never seen a dinner equal to it in certain respects—especially in regard to the marked sympathy that existed, without exception, between the speakers and audience. So far as we have been able to learn, these gentlemen, in the words given, simply voice the general consensus of opinion of all present. We tender hearty congratulations to the students—one and all.

THE MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

We regret exceedingly to notice lately a disposition on the part of some to drag the Medical Faculty of the University of Toronto into the arena of party politics. We have no desire nor intention to discuss any matters pertaining to "nepotism" or favoritism on the part of the Ontario Government, or any of its members; but we have a strong wish that there shall be no misapprehension among the graduates, or the public generally, about the methods of appointments to the medical teaching staff of that institution.

All appointments are recommended by the Senate of the university, and in no case, since the re-establishment of the faculty in 1887, has the government, or any member of it, shown the slightest inclination to interfere with that body in making its selection and recommendation. In the recent discussion two names have attained rather unpleasant prominence.

Dr. Primrose is said to have married the niece of the late Lady Mowat, and Dr. John Caven is said to be his father's son. While granting the correctness of these statements, we desire to say very decidedly that these men were appointed on their merits to their respective positions, and, since their appointment, have done their work with great efficiency.

With reference to salaries, we do not care at present to express any opinion, but we may briefly explain the facts. It was thought advisable by the Senate to appoint two professors in the departments of anatomy and pathology who were giving their whole time to their respective subjects, and would, in consequence, be precluded from continuing in active practice. It was decided, therefore, to give each of these professors the guaranteed salary of \$1,500. Other members of the teaching staff, including the lecturers and demonstrators, were given fixed salaries ranging from \$350 to \$500 each.

It was expected that after paying the necessary expenses and these fixed salaries there would be a residue sufficient to pay the remaining professors \$750 each. There was some serious mistake, however, as it turned out that there was only sufficient to pay them \$440 each. It is proposed that an amount sufficient to pay the balances shall be taken from the surplus fund; *i.e.*, the sum of the savings of the faculty during the first five years of its existence. This proposal, however, is likely to meet with some opposition. [The editor assumes full responsibility for this article, which has been written without the knowledge of Drs. Primrose and Caven].

Correspondence.

LODGE PRACTICE.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—The following members of the medical profession of the town of Trenton, Ont., viz., Drs. A. R. Macdonald, J. B. Moran, T. J. Moher, Geo. Acheson, Jas. Third, and J. A. Stevenson, met on October 27th last to discuss various matters of mutual interest; among others the question of "lodge practice." Dr. Macdonald was elected chairman and Dr. Acheson secretary of the meeting.

After considerable discussion, in which all present took part, the following resolution was moved by Dr. Stevenson, seconded by Dr. Moher, and carried *unanimously* :

"We, the undersigned physicians residing and practising in the town of Trenton, Ont., do hereby pledge our honor not to enter into any contract with any society, club, lodge, company, or corporation, to give medical attendance, advice, or medicine to the members thereof for any stated period at a fixed rate per member, or for a lump sum per annum; or to do what is commonly known as 'lodge doctoring,' or to give our professional services to such on any other terms than to the general public; providing that this agreement does not affect existing contracts terminating at the end of the current year."

At a subsequent meeting, Drs. J. T. McKenzie and H. H. Hawley were present, and supported both the spirit and letter of the resolution.

Under date of November 1st, 1893, the document was signed by the following gentlemen: A. R. Macdonald, A.B., M.D.; John A. Stevenson, M.D.; J. B. Moran, M.D.; J. T. McKenzie, M.D.; Thos. J. Moher, M.D.; Geo. Acheson, M.A., M.B.; H. H. Hawley, M.D., M.R.C.S.

One individual who was present at the first meeting, and signified his entire accord with what was being done, for reasons best known to himself, has since refused to sign. However, those who attached their signature have decided that the resolution is binding.

The medical profession in Trenton, therefore, is making an attempt to get rid of the evil of contract work, and we hope that throughout the province an earnest effort will be made to set this matter right.

It was further unanimously agreed not to make examinations for life insurance in any company or fraternal benefit society for a fee of less than two dollars.

I have been requested, as secretary, to forward this communication to your journal.

Yours respectfully,

Trenton, Ont., Nov. 21st, 1893.

GEO. ACHESON.

Book Reviews.

SELECTED PAPERS IN GYNECOLOGY AND OBSTETRICS. By Dr. Berry Hart, M.D., F.R.C.P., etc., late president Edinburgh Obstetrical Society. Edinburgh and London: W. & A. K. Johnston, 1893.

Dr. Berry Hart is known to Canadians chiefly through the Manual of Gynecology published by himself and Dr. A. H. Barbour. As a rule, less is known about many of his most valuable lectures and papers which have been published in British medical journals, chiefly in the *Edinburgh Medical Journal*. Many of them are in advance of the times, while all will rank with the best

contributions to gynecology and obstetrics of this century. We are exceedingly glad that these papers are now published in concise form, and at a low price, and we can assure our readers that they ought not only to be read, but carefully studied, by all physicians engaged in general practice, including those especially who do obstetrical and gynecological work.

The papers published in this volume treat of subjects connected with the anatomy, physiology, and pathology of the female pelvis, and practical discussions on various subjects in obstetrics and gynecology. Among the contents we find his presidential address delivered before the Edinburgh Obstetrical Society, in which he takes as his text the work of Dr. Matthews Duncan. H. refers to the fact that Duncan imported physical conceptions into midwifery. This is well known in all parts of the world, and we are glad to say, in the same connection, that, in the class of scientific observers which he has left behind him, no figure stands out more prominently than that of Dr. Berry Hart. We hope this book will be widely read in Canada.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M.D., F.R.C.P., Professor of Obstetric Medicine in King's College, etc. Sixth American from the eighth English edition, with notes and additions. By Robert P. Harris, A.M., M.D., Honorary Fellow of the American Gynecological Society and the Obstetrical Society; corresponding member of the Obstetrical Society of Leipzig, etc. Philadelphia: Lea Brothers & Co., 1893.

Playfair's Midwifery is probably the most popular text-book on this subject that has appeared since Tyler Smith's time. Since its first publication in 1876 eight editions have passed through the press in Great Britain, and six in the United States. The present edition contains much that is new, although not quite so much as we should have liked to see.

In speaking of the anatomy of the pelvis, the author refers to Dr. Berry Hart's description of the structures forming the floor of the pelvis and the perineum. We desire to commend his adoption of Dr. Hart's views as to the anatomy, but regret that he has not gone a step further in the way of changing his views with reference to the mechanism of the head delivery. He says: "As the forehead descends, the sub-occipito-bregmatic, the sub-occipito-frontal, and the sub-occipito-mental diameters successively present; the occiput turns more and more upward in front of the pubes, and at last the face sweeps over the perineum and is born." We believe this is bad teaching, particularly when we consider its results in forceps delivery. In speaking of the use of the forceps he says: "As the head is about to emerge it is necessary to raise the handles towards the mother's abdomen." The result of this in actual practice is (frequently at least) to change a sub-occipito-bregmatic diameter to a sub-occipito-mental, in which case the chin cuts through the perineum like a knife. This has been noticed by many, but not generally understood. Goodell tells young practitioners to remove the blades as soon as the head reaches the outlet. As a matter of fact, one will do no harm in retaining the blades on the head if he manages his forceps properly, or if he uses a well-constructed axis-traction forceps according to the methods described by Milne Murray and others of the Edinburgh school.

In speaking of the induction of premature labor he describes the Champetier de Ribes' dilator which has been used so successfully in both the old and new world during the last two years ; but makes no mention of Pelzer's method by the intra-uterine injection of glycerine. In speaking of abnormal pregnancy he adds much that is new, especially with reference to tubal pregnancy ; but we think it would have been well if he had rewritten the whole chapter, because, as it now appears, there is too much evidence of patchwork, and a lack of symmetry which is unusual in the writings of this distinguished author.

The chapter on symphysiotomy contains the most recent views with reference to this resuscitated operation. He still retains his long description of that practically obsolete operation known as laparo-elytrotomy or celio-elytrotomy. It is hardly worthy of the space which it occupies. We think a reference of a few lines would be all sufficient.

Some additions have been made to the chapter on puerperal septicemia, and some portions have been changed. Dr. Playfair is so clear in the expression of his views, and has such an eye to practical utility, that his description of most subjects is both charming and useful. This chapter on septicemia forms about the clearest and most pleasing reading on this subject that can be found in any text-book. Without approving of all his views, we can heartily recommend it to advanced students and young practitioners. We think that Dr. Playfair is quite right in attaching importance to sanitary defects as causes of puerperal disease. It may be that the disease arising from such causes may be, in some respect, yet to be discovered, different from typical septicemia ; yet we must ever keep in mind the gravity of sanitary defects, and, from a practical point of view, there is no harm in associating them with septicemia. He thinks it well to retain the term auto-genetic in connection with the causes, and makes sapremia synonymous with self-infection. While this may not be exactly correct, still it simplifies matters for the student, while the remarks on hetero-genetic will induce him to consider well the best methods of preventing infection.

HERNIA : ITS PALLIATIVE AND RADICAL TREATMENT IN ADULTS, CHILDREN, AND INFANTS. By Thos. H. Manley, A.M., M.D. Philadelphia : Medical Press Company.

This monograph is well worthy of attentive perusal by those who wish to obtain a clear idea of what has been and is being done in this important branch of surgery, and do not wish to secure this by the laborious perusal of larger monographs and original articles.

A useful chapter is that devoted to Congenital Hernia and the Hygiene of Infancy, in which the use of the regulation binder is discouraged, and attention drawn to the possible existence of stenosis of the urethra or atresia of the prepuce as etiological factors.

Speaking of the treatment of hernia by tentative measures, Dr. Manley advises that in the mild cases we try what correction of any existing digestive disturbance and the keeping of the child off its feet will do towards helping nature to effect a cure before resorting to a truss. In case a bronchitis or whooping cough develop, the prompt application of a truss is insisted upon.

Considerable prominence is given to the use of cocaine anesthesia in operations for strangulation. We are quite prepared to agree with the writer that in serious cases the risk from collapse, as well as that from post-operative pneumonia, will be less after cocaine anesthesia than if one of the pulmonary anesthetics had been employed, to say nothing of the advantage of escaping the vomiting which so constantly follows the taking of chloroform or ether. On the other hand, there are disadvantages connected with local anesthesia, especially in tedious operations.

We are quite in sympathy with the author when he says, in speaking of resection of the intestine in strangulation: "Indeed, for one to undertake an enterorraphy on a gangrenous hernia without ample experimentation upon the lower animal, and a thorough knowledge of the physiological anatomy of the intestine, its relation and appendages, is little short of criminality."

The work is written in good taste, the descriptions of the different operations are terse and simple, and, at the same time, with few exceptions, clear, and sufficiently full for the needs of the average practitioner.

There is a good summary of recent modifications (Championnière, McBurney, McEwan-Cockers, Bassini); but in giving just prominence to European and American authorities, Dr. Manley has overlooked the operation of his illustrious fellow-countryman, Halstead.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajous, M.D., and seventy associated editors, etc. Vol. II., 1893. The F. A. Davis Company, publishers.

This publication is deservedly popular, and this year is at least up to the average in excellence. The principal subjects treated in Volume II. are: Diseases of the Brain, by Landon Carter Gray; Spinal Cord, by H. Obersteiner; Mental Diseases, by George H. Rohé; Diseases of the Uterus, Peritoneum, and Pelvic Connective Tissue, and Disorders of Menstruation, by Paul F. Mundi; Diseases of the Ovaries and Tubes, by E. E. Montgomery; Diseases of Vagina and External Genitals, by J. M. Baldy; Diseases of Pregnancy, by A. Lutand; Obstetrics and Puerperal Diseases; Diseases of the Newborn, by Andrew F. Currier; Dietetics and Gastro-Intestinal Disorders of Infancy, by Louis Starr; Growth and Age, by C. S. Minot; etc.

Medical Items.

SIR JAMES GRANT, M.D., of Ottawa, was elected, December 7th, to represent his city in the Dominion Parliament.

DR. GEORGE ACHESON, who has been practising in Trenton for the past year, has removed to Galt, where he will practise in the future.

PROFESSOR JOHN TYNDALL, the eminent English scientist, died December 4th from an overdose of chloral, administered by mistake by his wife.

JOHN M. KEATING, M.D., LL.D., the distinguished medical author, formerly of Philadelphia, died at his late residence, Colorado Springs, November 18th.

NOTIFICATION OF TUBERCULOSIS.—The Philadelphia County Medical Society has appealed to the Board of Health, of Philadelphia, to place tuberculosis upon the list of contagious diseases to be reported to the Board.—*Medical Record*.

INTERNATIONAL MEDICAL CONGRESS.—A. Jacobi, M.D., 110 W. 34th street, New York, the chairman of the American National Committee of the International Medical Congress; which was postponed from September 24th on account of cholera prevailing in Italy, has been notified by the secretary general that the congress will be held at Rome from March 29th to April 5th, 1894. Instructions and documents relating to the journey, etc., are promised for the near future.

DR. JAMES W. EDGAR was appointed superintendent of the Hamilton City Hospital, November 13th, in the place of Dr. Olmsted. Dr Edgar graduated in two faculties in the University of Toronto receiving the degree of B.A. in 1888 and the degree of M.B. in 1891. He then spent some time at the Johns Hopkins University, Baltimore, where he devoted his attention especially to pathology and bacteriology. His career thus far has been an honorable and successful one, and there is every reason to believe that he will prove a worthy successor to Dr. Olmsted.

TORONTO UNIVERSITY MEDICAL DINNER.—The following were the officers of the dinner given by the students of the Medical Faculty of the University of Toronto: Honorary member, Dr. I. H. Cameron; President, W. H. Alexander; 1st Vice-President, J. Sheahan; 2nd Vice-President, E. L. Roberts; Hon. Secretary, Frank W. Smith; Committee, 4th year, B. A. Campbell, D. J. Armour, B.A.; 3rd year, G. Simpson, J. S. Sloan, H. W. Miller; 2nd year, H. H. Ross, R. H. Somers, J. H. Miller; 1st year, D. McGillivray, G. H. Jackson, J. H. Mullin, J. A. Cummings.

THE PUBLIC RECOGNITION OF MEDICAL EMINENCE IN FRANCE.—In a memorial notice on Jean-Martin Charcot, published in the *Johns Hopkins Hospital Bulletin* for September, Professor Osler delicately alludes to the high public status of the physician in France as contrasted with other countries. He says: "A finely tempered individualism, prone though it be to excesses, is one of the glories of the French character. The *man* in France stands for more than in any other land; his worth and work are there more truly recognized, and there his relative position in the history of art, literature, or science is more justly gauged. Alone among the nations of the world, France honors duly the mighty dead of our profession. Not in the Pantheon only, but in statues, in the names of streets, and in the names of hospitals, one is constantly reminded in Paris that such men as Bichat, Laennec, Pinel, Trousseau, Broca, Bernard, and others have honorably served their day and generation. The memory of Charcot is secure in such a land, and with us, too, it will rest safely, cherished beside that of Laennec and Trousseau."—*New York Medical Journal*.

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